



ABS House, Canberra, Australia

6-7 June 2005

CONFERENCE PAPER:

“Measuring Road Rage”

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This conference was organised by the Australian Institute of Criminology in conjunction with the Australian Bureau of Statistics.

Introduction

Over the last ten years, there has been considerable public discussion of the problem of 'road rage'. Articles regularly appear in the press and governments have been prompted to take action to control what seems to be a growing incidence of violence associated with motor vehicle use. But is 'road rage' a real and growing crime problem, or merely an exaggerated phenomenon created by the press? This paper describes the work of the Victorian Parliamentary Drugs and Crime Prevention Committee in defining the problem and in quantifying its extent. The views expressed in this paper do not necessarily reflect those of the Victorian Parliamentary Drugs and Crime Prevention Committee, the Australian Institute of Criminology, the Australian Bureau of Statistics, or the Australian Government.

On 20 April 2005, the Victorian Parliamentary Drugs and Crime Prevention Committee tabled its Final Report on the reference it had been given in June 2003 on "Violence Associated with Motor Vehicle Use". The Terms of Reference of the Inquiry were to examine:

- (a) the incidence, prevalence, severity, cost and impact of violence associated with motor vehicle use;
- (b) Victorian, national and international research into violence associated with motor vehicle use;
- (c) the effectiveness of strategies and initiatives relating to violence associated with motor vehicle use; and
- (d) the need for policy and legislative reform to reduce violence associated with the motor vehicle use at the state level.

This paper considers a number of issues concerning research design and data quality which arose out of the need to quantify the size and impact of violence associated with motor vehicle use. The specific questions are:

1. How should 'violence associated with motor vehicle use' be defined, and what is its relationship to 'road rage'?
2. What are the causes of Road Violence, and how can these be classified?
3. What is the financial and personal impact of Road Violence and how can these aspects be quantified?
4. What sources of data can inform research into the prevalence, severity, cost and impact of Road Violence?
5. Do the data provide a true and accurate picture of Road Violence?
6. How can the quantification of Road Violence be improved in the future?

Definitional Issues

'Road Rage' is one of those notoriously difficult concepts in crime and justice. In some respects it is, like an elephant, easier to recognise than it is to define!

As an example, a recent advertisement for Fiat cars used a scene in which a motorist becomes enraged at a cyclist resting up against his new car at the traffic lights – and then takes revenge against the cyclist causing him to fall off his bike.

A more serious instance led to a court hearing in Melbourne on 2 May 2001 with the offender being sentenced to six and a half years' imprisonment with a non-parole period of four and a half years.

The incident took place as follows:

At about 4.30 pm on Monday 17 January 2000, a father and his son were returning home down Gladesville Boulevard in Paterson Lakes. While waiting to turn right into their driveway they saw a car speeding down the road in the opposite direction, driving at what they estimated to be between 80 and 100 kilometres per hour in a 60 kilometre per hour zone. The son, who was driving, tooted his horn at the vehicle as it passed him, attempting to get it to slow down. The driver slammed his foot on the brakes, executed a U-turn, and drove back to where the son had now parked. He got out of his car, carrying a piece of wood, and approached the father and son, abusing them about honking their horn at him. He walked up to the father, punched him in the face and struck him on the arm with the piece of wood. A fight then developed between the three men, during the course of which the defendant threatened that he would return to their house and 'demolish' it and them as well. After an exchange of blows, the defendant returned to his car and drove off. It was at about this time that another son arrived home. The defendant, who had only proceeded a short way down the street, executed another U-turn, returning to their house. He deliberately swerved his car into the parking lane, at approximately 50–70 kilometres per hour, hitting the second son who had his back turned at the time. The boy flew into the air, hitting the defendant's windscreen before landing in the gutter where he hit his head. The defendant made no attempt to stop and accelerated away at high speed. The boy's skull was broken in two places and he remained in a coma for two months in a critical condition. He spent an additional eight and a half months in hospital recovering from the trauma, which has left him with permanent brain injury ((2001) VSCA 59 (2 May 2001) per Tadjell JA).

Defining Road Violence and Related Concepts

In Victoria, the Drugs and Crime Prevention Committee formed the view that the colloquial expression 'road rage' was so imprecise and subject to differing interpretations that its use should be avoided entirely. Instead, the Committee adopted three separate concepts: Road Violence, Road Hostility, and Selfish Driving.

The definition of Road Violence was: 'Road Violence' involves spontaneous, driving-related acts of violence that are specifically targeted at strangers, or where strangers reasonably feel they are being targeted.

This definition followed that generally accepted in the academic community worldwide. By limiting Road Violence to these circumstances, various other crimes are excluded which could potentially be included as 'violence associated with motor vehicle use; namely carjackings, the use of cars to commit robberies, the premeditated use of cars to commit violence against particular people or properties, and acts of violence occurring between passengers of the same car – such as domestic violence that takes place in a car.

Although Road Violence formed the central focus of the Inquiry, certain other acts were also discussed as background, including incidents of what the Committee called 'Road Hostility' and 'Selfish Driving'.

The definition of 'Road Hostility' was: 'Road Hostility' involves spontaneous, driving-related non-violent but hostile acts that are specifically targeted at strangers, or where strangers reasonably feel they are being targeted. Examples include making obscene gestures at other road users or verbally abusing them. The difference between Road Violence and Road Hostility is simply one of severity. They are both actions that are intentionally targeted at another road user, but in the one case the action is violent while in the other it is simply hostile.

The definition of 'Selfish Driving' was: 'Selfish Driving' involves time urgent or self-oriented driving behaviour, which is committed at the expense of other drivers in general, but which is not specifically targeted at particular individuals. Selfish Driving is driving behaviour with the objective of gaining time, space and pleasure but without the intention to harm people. Examples include weaving in and out of traffic or overtaking in the left lane. Unlike acts of Road Violence and Road Hostility, such driving is not specifically targeted at particular road users. The aim of Selfish Driving is not to harm another person or even to express displeasure with others. Rather, the aim is generally to 'get ahead' or to maintain progress.

In classifying an act as 'Road Violence', 'Road Hostility' or 'Selfish Driving', consideration must be given to three considerations. First, the intention or motivation of the perpetrator (e.g. overcoming a perceived obstacle, showing displeasure, or seeking to harm another person). Secondly, the impact of the action (e.g. whether the action causes a person to believe that they are being targeted and / or whether they fear for their safety). Thirdly, the circumstances of the action (e.g. a truck tailgating a car, or a group of young men abusing an elderly woman).

There is no clear line that can be drawn between the three forms of conduct. Violence need not always be physical. For example, approaching a person but not touching them can sometimes be violent such as when an attempt is made to force another driver off road, or where tailgating amounts to stalking. Some acts will, however, be unambiguous, such as an assault and battery which will always amount to Road Violence. Most acts are capable of falling into multiple categories, depending on the circumstances. For example, tailgating may amount to Road Violence or Road Hostility, or even Selfish Driving, depending on how long it is done for, to whom it is done, and whether the victim becomes fearful for his or her safety.

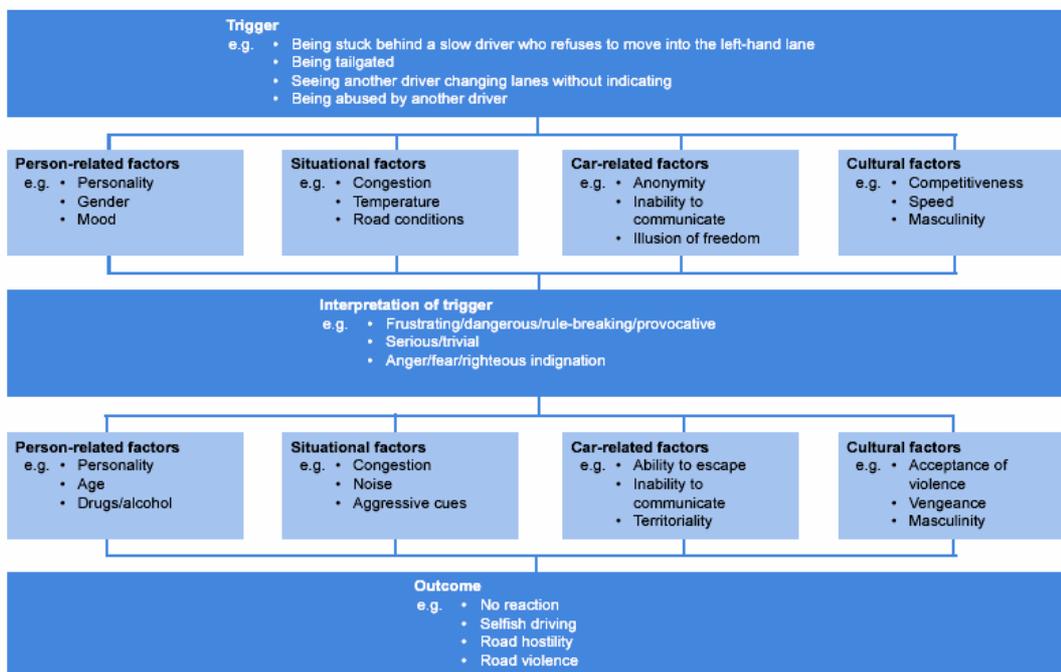
A further problem with defining and measuring Road Violence is the difficulty in determining precisely whether the parties involved in incidents are offenders or victims. Sometimes, it is unclear who the primary victim or perpetrator of an incident actually was, with both parties often blaming each other and each, on occasions, contributing to the final outcome of the incident. In quantifying the extent of Road Violence, therefore, a decision needs to be made about whether individual offenders and victims will be counted or whether incidents will form the unit of measurement.

Finally, problems arise where there has been a series of offences that arise out of one transaction. Decisions need to be made as to whether every offence that took place should be counted, only the most serious offence, or simply count the entire transaction as one 'incident'.

Understanding the Causes of Road Violence

In quantifying the extent of Road Violence, it is also necessary to understand the relationship between what might be called the antecedents of Road Violence and the criminal act that might lead to a prosecution. In the media, it is often the antecedents of Road Violence that are referred to as 'road rage' instead of the final outcome of the illegal transaction. In its Inquiry, the Drugs and Crime Prevention Committee devised a causal model to explain Road Violence. This model is summarized in the Figure 1.

Figure 1 – The Antecedents of Road Violence



Source: Drugs and Crime Prevention Committee (2005, p. 186).

The Committee explained this model by acknowledging that in the vast majority of cases of Road Violence there is a specific incident that precedes the act of violence, such as one driver tooting another or changing lanes without indicating. This has led some to speculate that it is these 'triggering events' that are the 'cause' of Road Violence. The Committee argued, however, that people in fact make a decision to act violently in response to particular triggers, rather than such triggers causing the violence to occur. This choice to act violently may be influenced by a range of factors, such as the individual's personality, the stress they are suffering from at the time of the incident, or their ability to express their aggression anonymously because of the nature of the car. Road Violence is, however, a decision for which the individual is responsible, and should not be attributed to the driving behaviour of the victim.

Road Violence is not, therefore, the result of an uncontrollable urge that sweeps over the perpetrator due to incidents of poor driving. Rather, Road Violence, like any other form of violence, is usually a deliberate act, committed for particular reasons.

The Committee identified four broad categories of factors which it believed influenced the decision to act violently on the road to a greater or lesser extent. These are: '**person-related factors**' (which include enduring traits, such as the perpetrator's personality, belief system, age, gender and health and various more transient states, such as the perpetrator's mood and level of stress at the time of the incident, as well as the influence of drugs or alcohol); '**situational factors**' (which include road-related matters, such as the condition of the road and whether traffic was congested at the time of the incident, as well as environmental factors such as the temperature); '**car-related factors**' (which relate to the role played by the car in the commission of acts of Road Violence); and '**cultural factors**' (including national or even international cultural values, such as the desirability of competitiveness and notions of masculinity).

Each of the factors plays a dual role. First, they can influence the way in which a person views or interprets specific 'triggering events', and second, they can affect the way the person responds to those events. This creates a chain of events starting with a 'triggering event', such as being tailgated. Person-related factors, such as personality or gender, play a role in the interpretation of that trigger, as do situational factors such as congestion, correlated factors such as anonymity, and cultural factors such as the value placed on competitiveness. For example, whether being tooted is seen to be a hostile act or an innocent attempt to communicate, and whether the driver who is tooted becomes angry or not, will depend on factors such as his or her mood, the traffic conditions at the time, and the horn-honking culture in the relevant location.

Road Violence is not, therefore, caused by any single factor. Rather, it is the product of a complex interplay of factors, which are precipitated by a 'triggering event'. Understanding this interplay of factors is of critical importance in measuring instances of Road Violence with accuracy.

Understanding the Impact of Road Violence

Measuring the financial and personal impact of Road Violence presents particular difficulties. The statistics on 'road user violence' supplied by Victoria Police to the Committee indicated that in 80 per cent of cases, no financial loss was reported. For the remaining 20 per cent of cases in which victims did report some financial loss, the range of loss varied from \$25.00 to \$28,000.00 with a mean value of \$174.24 per incident. In addition to monetary loss, the Committee found that more than half of the individuals involved in incidents of road violence suffered injuries – many requiring treatment and occasionally involving serious consequences including psychological, emotional or physiological effects and even death in some cases.

There is, however, a range of other consequences of Road Violence including public liability costs, insurance claims, and personal injuries suffered. On a broader social level, the experience of Road Violence may lead some individuals to withdraw from road usage in part or in full. Road Violence may also be costly in terms of higher fuel consumption, tyre and brake wear and the repair of collision damage. Although these diverse consequences have not been adequately quantified at present, they all need to be considered in assessing the overall impact of the problem.

Data Sources

The principal sources of data which have been relied on to quantify the nature and extent of Road Violence include victimisation surveys, official police statistics, and analyses of media reports. Each presents problems for researchers in understanding the true extent and impact of the problem.

Victimisation Surveys

Because Road Violence is a relatively rare phenomenon, the use of victimisation surveys is problematic as sample sizes need to be extremely large in order to obtain data with sufficiently high numbers to enable statistical analyses to be performed. In Victoria, the Parliamentary Committee was not able to fund research of this kind. There have, however, been a number of previous surveys undertaken which have sought to document the extent of Road Violence.

In Victoria, between 25 November 1997 and 2 December 1997, the Victorian Community Council Against Violence conducted a survey of 801 Victorian drivers aged 18 or over about aggression and / or violence associated with motor vehicle use. Some 14 per cent of those surveyed recalled being a victim of 'severe road rage' as either a driver or passenger within the last 12 months, with 18 per cent recalling having been victims in the last two years, and 35 per cent having ever been a victim.

Only 7 per cent of drivers admitted to having committed 'severe road rage'. The definition of 'severe road rage' used by the Victorian Community Council Against Violence (1999, p. 39) was far broader than the Parliamentary Committee's definition of Road Violence, and included not only assaults but also following a vehicle, swerving in front of a vehicle, and trying to run a vehicle off the road, amongst others.

For the last decade, AAMI has conducted a study of driver attitudes, making use of claims data as well as the results of a national survey of 1,880 licensed drivers around Australia (excluding Western Australia and the Northern Territory). Questions about 'road rage' (which is not defined by AAMI, but considered synonymous with aggressive driving) have been included in the survey since 1996. The tenth *Crash Index* was released in October 2004 (AAMI 2004). The principal finding of relevance to the current discussion was that 5 per cent of drivers said that they had been physically assaulted by another driver (over 90 individuals). This was the same percentage as in the 2003 *Crash Index*.

Overseas, large scale victimisation surveys have been conducted, particularly in the United States, Europe and Canada where between 1 and 5 per cent of those surveyed have reported being victimised by severe forms of 'road rage'. A number of the victimisation surveys have, however, been of questionable value as they have sought to quantify the extent of 'road rage' without adequately defining the concept (Drugs and Crime Prevention Committee 2005, p. 69).

In view of the large numbers of road users, however, when these small percentages are extrapolated to entire populations, very large numbers of individuals are likely to have been victimised. In Victoria, for example, there are some 3.3 million licensed drivers. Applying victimisation rates of between 1 and 5 per cent would equate to between 33,000 and 165,000 individuals being victimised by Road Violence, assuming that all demographic groups of drivers have the same risk of victimisation as others. Even accounting for different rates of victimisation for different demographics, the result would still be that many thousands of individuals are victimised each year in Victoria.

Police Statistics

As is the case with many other quantitative questions in criminal justice, official statistics are often not classified into sufficiently precise categories to enable trends to be detected with respect to particular methodologies of offending. Police statistics report, for example, crimes against the person with sub-categories including homicide, assault and abduction. In most jurisdictions it is impossible to know if these arose out of instances of Road Violence unless actual narratives attached to police reports are analysed.

In Western Australia, one such analysis of police report narratives was undertaken by the University of Western Australia's Crime Research Centre on behalf of the Western Australian Royal Automobile Club. Data used for the study came from incidents of driving-related violence present on the Used Offence Information System of the Western Australia Police Service from 1991 to 2000 (University of Western Australia Crime Research Centre 1997; Harding et al. 1998). This study was limited to violent rather than aggressive road incidents, which approximated the category of Road Violence used by the Parliamentary Committee in Victoria.

For the period 1991 to 1995, some 7,326 offence narratives were examined and, on average, approximately 10 per cent involved incidents of driving-related violence – a total of 797 incidents (10.9%). Between 1996 and 2000 a further 1,404 incidents were identified. Overall, there had been an increase in the number of incidents over the 10-year period and as a proportion of the population there had also been an increase. In terms of street assaults, however, there has been no increase at all, with driving-related violence incidents remaining constant as a proportion of street assaults committed by strangers (between 10 and 11 per cent) as reported in Table 1.

Table 1 - Western Australian driving-related violence incidents, 1991–1995

Year	Number of incidents	Incidents as a % of all street assaults by strangers
1991	119	9.8
1992	135	10.8
1993	143	10.3
1994	202	12.6
1995	198	10.5
Total	797	10.9

Source: University of Western Australia Crime Research Centre 1997, p.36 cited in Drugs and Crime Prevention Committee (2005, p. 53).

In Victoria, in 2000, the Police began identifying alleged incidents of Road User Violence that had been reported officially. The definition of 'road user violence' employed by Victoria Police for the purposes of recording on the LEAP database largely approximated the definition of Road Violence used by the Parliamentary Committee in Victoria, save that the Committee's definition of Road Violence required that the act be 'spontaneous' as opposed to premeditated. The operational definition of 'road user violence' used by Victoria Police was: 'a violent offence committed by strangers based on their behaviour as drivers, cyclists or pedestrians'.

Table 2 shows the number of separate 'road user violence' incidents recorded by Victoria Police from 1 July 2000 to 30 June 2004.

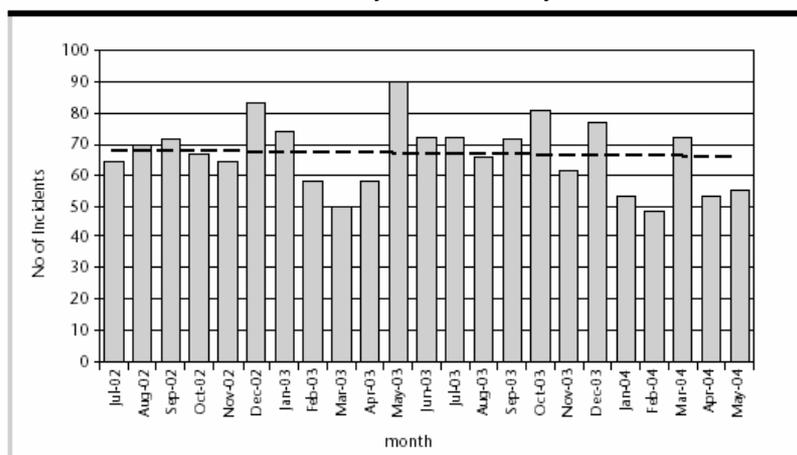
Table 2 Road User Violence incidents recorded on the Victoria Police Law Enforcement Assistance Program (LEAP) 1 July 2000 – 30 June 2004

Period	Frequency	Percentage
1 July 2000 to 30 June 2001	3	0.2
1 July 2001 to 30 June 2002	84	5.5
1 July 2002 to 30 June 2003	798	52.4
1 July 2003 to 30 June 2004	639	41.9
Total	1,524	100.0

Source: Victoria Police, Statistical Services Division. Data extracted from LEAP, 10 June 2004, cited in Drugs and Crime Prevention Committee (2005, p. 72).

These data for the period 1 July 2002 to 31 May 2004 are presented graphically by calendar month in Figure 2.

Figure 2 - Incidents reported to Victoria Police involving Road User Violence, 1 July 2002–31 May 2004

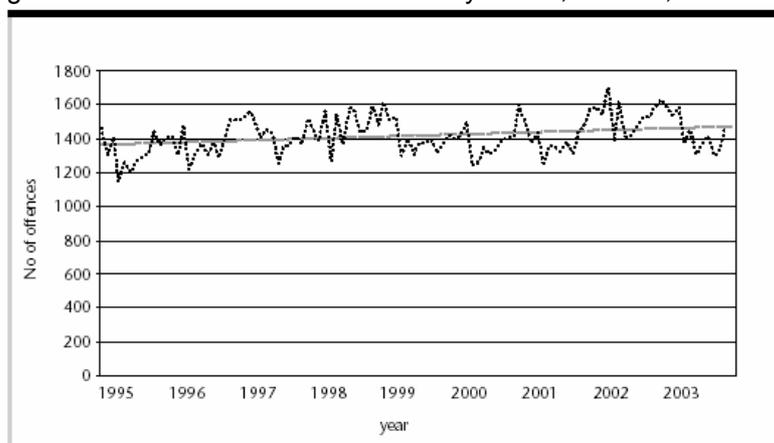


Source: Victoria Police, Statistical Services Division. Data extracted from LEAP, 10 June 2004, cited in Drugs and Crime Prevention Committee (2005, p. 73).

From the trend line in Figure 2, it appears that the number of road user violence incidents recorded in LEAP has remained constant over the two years in question. In order to understand these data, it is necessary to compare trends in motor vehicle usage as well as in general crimes of violence.

In Victoria, over the preceding nine years, the number of recorded assault offences has increased approximately 7 per cent, as shown in Figure 3.

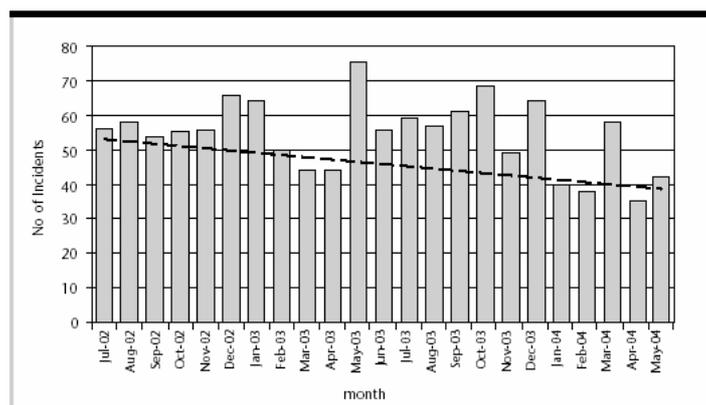
Figure 3 - Number of Assault Offences by Month, Victoria, 1995–2003



Source: Unpublished data from ABS recorded crime collection, 2003, cited in Drugs and Crime Prevention Committee (2005, p. 78).

By way of comparison, assault offences associated with Road User Violence as recorded on the Victoria Police database, LEAP, have declined since July 2002 as shown in Figure 4.

Figure 4 - Reported Victoria Police Assault Offences Associated with Road User Violence July 2002–May 2004



Note: Most serious single offence per incident.

Source: Victoria Police, Statistical Services Division. Data extracted from LEAP, 10 June 2004. cited in Drugs and Crime Prevention Committee (2005, p. 74).

There has also been an 8 per cent increase in the number of licensed drivers in Victoria between 1998 and 2003, and a 15 per cent increase in kilometres travelled annually by vehicles in Victoria between 1998 and 2002 (Drugs and Crime Prevention Committee 2005, p. 79). This means that the number of potential opportunities for Road Violence to occur has increased over the last five years.

On the basis of the information on 'road user violence' collected by Victoria Police since July 2002, it appears that there is no evidence of an overall increase in recorded incidents in Victoria and that the incidence is very low compared with other crimes of violence. Considering the increase in road user activity in Victoria, it is likely that the actual rate of road user violence per licensed driver or per distance travelled by drivers in Victoria has actually declined.

In addition, the number of incidents of Road Violence appears to be considerably smaller than the number of motor vehicle crashes that occur in Victoria. During the period 1 July 2001 to 30 June 2002 (the most recent financial year for which data are available), there were 31,361 crashes involving casualties and 672 crashes involving fatalities in Victoria, totalling 32,033 crashes involving casualties or fatalities. For the same period, there were 84 incidents of 'road user violence' recorded on the Victoria Police LEAP database. Assuming a reporting rate of 9 per cent (as found by the VCCAV Report 1999), it can be estimated that some 933 incidents of 'road user violence', may have taken place during the year 2001–2002 in Victoria. Accordingly, the number of incidents of 'road user violence' was approximately 3 per cent of the number of crashes involving casualties and fatalities that took place in Victoria in 2001–2002, or one case of 'road user violence' for every 34 casualties or fatalities (Drugs and Crime Prevention Committee 2005, p. 81).

Finally, it should be recalled that police statistics only record matters that have come to the attention of the police. Previous studies have found that 'road rage' tends to be under-reported as many victims simply accept that it was a consequence of the driving environment and take the matter no further. An additional cause of non-reporting is that often the perpetrator will leave the scene and be unable to be identified by the victim and located by the police. Victims of 'road rage' may also not report the incident to the police because of lack of damage to the car, concern about reprisals, a fear of appearing foolish, or through concern at the effect the report may have on their insurance premiums.

There does, however, seem to be a difference in reporting rates for serious and less serious cases, with crimes involving Road Violence being reported more often than instances of Road Hostility or Selfish Driving. This may be due to the fact that where injuries are suffered, victims tend to report the matter to the police for reasons associated with claiming compensation or insurance. In the study carried out by the Victorian Community Council Against Violence (1999), for example, only 9 per cent of victims of *severe* road rage reported the incident to the police (11 per cent of males and 6 per cent of females). Some 20 per cent of older male victims aged 55–64 reported incidents to the police. In another study of 68 self-reported 'road rage' incidents by Fong, Frost and Stansfeld (2001), only 7 per cent were reported to police, although most of the incidents examined were not severe.

In addition, reporting rates may vary depending on the relationship between the perpetrator and the victim. The University of Western Australia Crime Research Centre (1997), for example, argued that incidents involving strangers were more likely to result in a report to the police than incidents involving parties known to each other. Because the definition of Road Violence requires those involved to be unknown to each other, this would tend to make reports of Road Violence more frequent than the less serious matters involving Selfish Driving.

Generally, it seems that the reporting rate for incidents of 'road rage' is much lower than for assaults generally. In the latest International Crime Victimization Survey, some 37 per cent of assaults or threats were reported to police in the Australian sample (Johnson 2005, p. 37). On the basis of the few studies of 'road rage' that examined reporting rates, probably fewer than 10 per cent of 'road rage' incidents may be reported to police.

Media Analyses

Owing to the fact that 'road rage' is frequently discussed in the media, researchers have sought to quantify the extent of the problem by examining media reports in which the expression 'road rage' has been used. The difficulty which arises, however, is that the incidence and prevalence of 'road rage' is often inaccurately captured by many newspaper reports, with much of the discussion in the press concerning the concept of 'road rage' or the use of the term itself, without identifying specific incidents. As a means of quantifying the scale of the problem of Road Violence, such analyses leave a good deal to be desired.

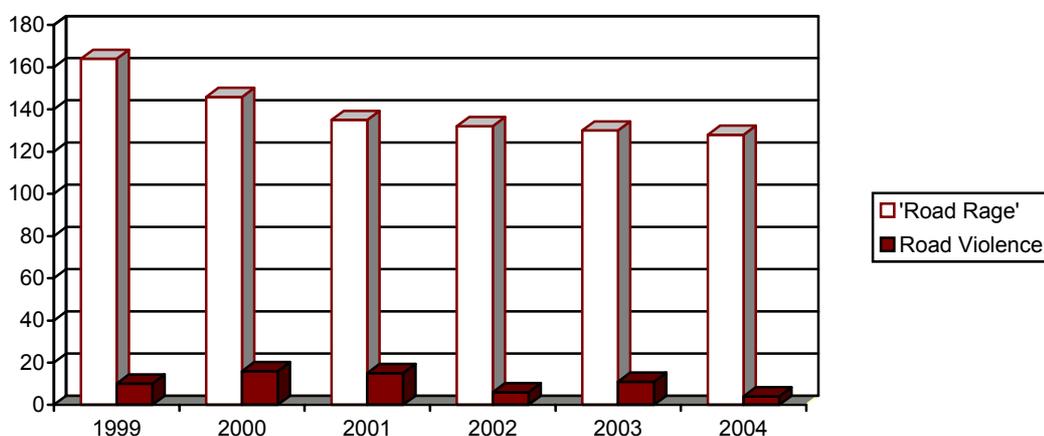
In Victoria, the Parliamentary Committee undertook an analysis of articles that mentioned the words 'road rage' that had been published in *The Age* and the *Herald Sun* newspapers. In all, between 1 July 1999 and 30 June 2004, 689 separate articles were identified in which the words 'road rage' appeared.

Extrapolating these data to the full six-year period (1 January 1999 to 31 December 2004), 835 articles in both newspapers would have referred to 'road rage' – an average of 139 each year (2.7 per week).

After inspecting each article to locate an identifiable incident of Road Violence (within the Committee's definition), 55 separate incidents of Road Violence were located within the specified period (some on more than one occasion and some in either or both newspapers). In all, 104 separate articles contained reference to these 55 incidents, or some 15 per cent of all the articles inspected. Extrapolating for the incomplete years of 1999 and 2004, it can be estimated that some 62 incidents would have been reported over the six years examined or approximately 10 incidents per year (less than one a month).

Figure 5, compares the number of newspaper articles containing the words 'road rage' and separate, identifiable Road Violence incidents reported in the two newspapers from 1999 to 2004.

Figure 5 – Media Reports of 'Road Rage' and Road Violence in Victorian Newspapers 1999-2004.



Source: Drugs and Crime Prevention Committee (2005, p. 95)

Note: Data have been extrapolated to full calendar years.

Similar studies have been conducted in the past elsewhere in Australia as well as in Europe and North America and all have found that the frequency with which 'road rage' is discussed in the press, far exceeds the actual reported incidence of Road Violence (Drugs and Crime Prevention Committee 2005, pp. 87-94).

On the basis of this research, it may be concluded that media commentary on 'road rage' has been extensive in recent years, but that the vast bulk of this does not involve the reporting of individual incidents of Road Violence. It seems that 'road rage' has become a popular expression used in a wide range of contexts to describe highly variable behaviours. As such, the analysis of newspaper and other media reports cannot be said to offer much in terms of precise quantification of the problem of Road Violence.

Data Accuracy

Most of the problems associated with measuring the incidence of Road Violence are due to definitional inaccuracy rather than data inaccuracy. A good deal of the prior research has simply not defined with precision the category of illegal conduct that is being examined. Questions have, however, arisen concerning the accuracy of what is being recorded officially.

Victoria Police indicated in its submission to the Committee that the 'road user violence' data recorded on LEAP may not accurately reflect the true extent of 'road user violence' incidents reported to police. The following were identified as potential sources that could possibly give rise to errors: incidents being incorrectly identified as falling within the definition of 'road user violence' by officers; instances in which multiple offences within an incident are each recorded separately; and a number of incidents recorded as involving 'road user violence' that involved persons known to each other, thus technically falling outside the definition of 'road user violence' (Drugs and Crime Prevention Committee 2005, p. 75).

These sources of error could, arguably, all tend to over-represent the number of instances of 'road user violence' that should have been recorded on LEAP. It was submitted, however, that these imperfections in the data were likely to account for a very small percentage of the total number of incidents recorded in the period 1 July 2002 to 31 May 2004. However, there may well have been errors in the period prior to this when the category of 'road user violence' was first being used.

Because of the importance being placed on Victoria Police data in documenting the scale of the problem of Road Violence in Victoria, the Parliamentary Committee determined to verify the accuracy of incidents recorded by police on the LEAP Database. Victoria Police was asked to provide the Committee with de-identified copies of LEAP records for all 'road user violence' incidents occurring within the dates 1 March 2004 to 31 March 2004. This month was chosen as it was within the more recent period when the earlier anomalies should have been eradicated and also represented a month with more than the mean number of incidents.

After reading the narratives attached to each of the 62 LEAP reports, it was found that all but one of the incidents involved Road Violence within the definition adopted by the Committee. The one exception concerned an incident that fell within the Committee's definition of Road Hostility. It involved a 19-year-old female victim and a 23-year-old male defendant that took place in country Victoria at approximately 6.45pm on a Monday. The young woman victim had been tailgating the male defendant's vehicle. When the vehicles stopped, it was alleged that the defendant got out of his vehicle and went over to the victim's vehicle where he 'told her off'. Conflicting accounts of events were given to police and no physical contact occurred.

On the basis of this study, it appears that the data recorded by Victoria Police in recent years do, in fact, fall within the definition of Road Violence. What has not been determined, however, is the extent to which all incidents of 'road user violence' are being captured on LEAP. This would require an analysis of narratives for all possible offences for the years in question.

Improving Data Collection

There are various ways in which the measurement of Road Violence could be improved.

A Specific Road Violence Offence

In some places, specific offences have been created to deal with various forms of 'road rage'. In New South Wales, for example, the *Traffic and Crimes Amendment (Menacing and Predatory Driving) Act 1997* (NSW) created new offences of 'menacing driving' and the more serious 'predatory driving'. Between 1999 and 2004, 836 charges were laid under this legislation, with 88 charges in 2004. Only 6 of the 61 predatory driving charges were proved between 1999 and 2004 as shown in Table 3.

Table 3 - Menacing and predatory driving charges and convictions in New South Wales, 1999-2004

Year	Menacing Driving Charges	Menacing Driving Proved	Predatory Driving Charges	Predatory Driving Proved	Total Charges	Total Proved
1999	3	-	12	-	15	-
2000	176	59	1	-	177	-
2001	169	66	16	-	185	-
2002	172	91	13	-	185	-
2003	173	-	12	-	185	-
2004	82	-	6	-	88	-
Total	775	-	61	6*	836	-

Note: – indicates information unavailable. * only total charges proved is available.

Source: NSW Police Service, unpublished data, cited in Drugs and Crime Prevention Committee (2005, p. 52).

In Victoria, however, the Parliamentary Committee took the view that the incidence of Road Violence was insufficiently high to warrant the introduction of a new criminal offence, and that there were few problems with using existing criminal laws to prosecute cases of Road Violence. It seems on the basis of the experience in New South Wales, that even if a new offence were enacted, it would not be used very often, and that difficulties may arise in proving allegations in the courts.

Identifying Road Violence Incidents in Official Statistics

In Victoria, the approach that has been taken is for police to flag specific incidents of 'road user violence' when recording new reports of alleged crimes. This requires the use of a carefully defined concept which will take account of the complexities of incidents, in order to isolate clearly the role of offenders and victims, and to distinguish between acts of varying degrees of seriousness. It would be worthwhile for the data collected in this way to be verified regularly in order to ensure that incidents being recorded do fall within the parameters of the definition being used.

Not a great deal is known about the judicial outcomes of cases of Road Violence that have been prosecuted in the courts. Unfortunately, official court statistics collected by the Australian Bureau of Statistics do not have an offence category or sub-category that approximates to crimes involving Road Violence, Road Hostility, Selfish Driving and related conduct. An ongoing review conducted by the Australian Bureau of Statistics is taking steps to improve data relating to criminal court statistics and hopefully questions relating to the collection of court statistics concerning Road Violence and related offences will be considered during this review.

Victimisation Surveys

The most effective way to improve research using victimisation surveys would be to conduct large scale surveys which would bring statistical power, and to ensure that care is taken in defining precisely which concepts are being examined. Simply asking subjects about their experience of 'road rage' victimisation is inadequate as the concept is far too broad. Carefully designed questions eliciting information about actual incidents of Road Violence could, however, provide useful data on the extent of victimisation as well as the nature and extent of harm suffered.

Media Analyses

The analysis of media reports can provide information on the extent to which various aspects of 'road rage' are being reported, but care is needed to distinguish commentaries about the use of the term 'road rage' from actual reports of incidents. Although reference to the term 'road rage' appears to have increased in the media in recent years, actual reports of incidents are rare and do not seem to be increasing.

In Victoria, the Parliamentary Committee suggested that journalists should familiarise themselves with the terms Road Violence, Road Hostility and Selfish Driving and that these terms be used in preference to 'road rage' in future media reporting. The Committee also thought that general deterrence would be enhanced if journalists publicised the judicial outcomes of cases involving Road Violence, including details of sentences imposed for specific offences committed. This would help to educate road users of the seriousness of Road Violence and make known that it is taken seriously by the community and the courts.

Conclusion

To conclude, although a good deal of research has been carried out into 'road rage' and associated activities, the quality of the research has been marred by poor definition of terms and concepts and by inadequacies in the recording of official statistics. Studies of media reports have provided few insights, again owing to the generality of what is being reported.

Serious forms of Road Violence continue to arise and although they are not as prevalent as other crimes involving physical violence, there remains a need to document their extent more precisely. Once the evidence base has been improved, efforts can then be made to devise appropriate strategies to reduce the extent of the problem. There is currently no shortage of potential solutions, but care is needed in choosing measures that are proportionate to the actual extent of the problem.

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