

Preventing driving related violence

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1. Introduction

Driving related violence is a common problem that has attracted much attention recently despite being a perennial rather than recent phenomenon. Theories of violence can be useful in guiding efforts at prevention. Driving related violence is defined here as acts of physical violence between strangers in traffic situations.

Although such violence is almost always associated with anger it reflects only the tip of the iceberg of the large number of angry or even aggressive transactions that occur in traffic. Driving brings together a broad mix of people in a situation requiring the co-operation to avoid dire consequences. Most stranger violence, however, occurs in situations chosen by victims and offenders. In other words, it could be argued that victims and offenders choose to be available for a "violence transaction" (Toch, 1986) by being together in drinking places and other high risk environments. The same can not be said of the road. The road is a normal, legitimate and mostly safe site for all participants. However, at this site a high amount of interaction is required and/or engendered. Out of this mix, it is therefore interesting to see how violence is distributed and what the main explanatory variables are and contrast this with stranger violence at other sites.

To explain driving related violence by reference to details of an altercation is unlikely to be helpful as there is much anger and many altercations on the road, very few of which result in violence. Rather than the situation, a better predictor are the propensities and attitudes the individual brings to the situation. In this paper it is argued that the situation operates like a filter sifting out those with a propensity to offend. The implications for prevention of this explanation focus on both minimising situations likely to result in violence but in also minimising and regulating pre-criminal behaviours which often precede full scale use of violence and focusing on regulating high risk individuals and their behaviour on the road.

This paper explores some of the issues raised in the work into driving related violence undertaken at the Crime Research Centre (at the University of Western Australia) over the last two years. This work is articulated in a report to the Royal Automobile Club of Western Australia (Crime Research Centre, 1997) and the theoretical issues drawn out in an article to be published by the Crime Research Centre team (Harding et al., 1998).

2. Driving Related Violence

Impulsive road violence is seemingly precipitated in response to driving behaviour or traffic conflict. The key precipitating factors are assumed to be the experience of anger and/or frustration. As defined above it is important to separate out from any analysis like this violence between familiars (which constitute the most common/typical background to violent crime). "Domestic" interpersonal disputes often continue on or spill over into driving related situation as we found in our initial study (CRC, 1997). A number of works have discussed the psychological issues involved in violent interactions between strangers.¹ Typically these involve reference to status defence and enhancement. For the individual perpetrator, violence is then seen as a necessary and justified response to what is perceived to be an injustice, usually some form of degradation or threat to the value of the self. Within this framework of beliefs violence often is not only excused, but is almost mandated.

The literature on aggression and violence in the roadway has been quite extensive. One of the most thorough reviews of the literature up to 1991 is provided by Novaco (1991). Some of the studies discussed by Novaco are listed in Table 1. Novaco also developed a typology of roadway aggression (Table 2) to tease apart the different kinds of violence that can occur on the roadway. This is important because to begin with an undifferentiated category "roadway violence" or "driving related violence" would obviously mix together this heterogenous mix of motivations, situations and etiologies.

¹ e.g. Indermaur 1995; Polk 1994; Luckenbill 1977; Katz 1988; Toch 1969; Athens 1980; Felson 1978, 1982

Table 1. Studies that concern driving related aggression and violence discussed by Novaco (1991).

Author(s)	Year	Title or focus	Nationality
Tillman and Hobbes	(1949)	The accident prone auto driver	Canada
Conger et al	(1959)	Psychological factors -road accidents	USA
Schuman	(1967)	Young male drivers	USA
Parry	(1968)	Aggression on the road	British
Whitlock	(1971)	Death on the road	British
Richman	(1972)	The motor car & territorial aggression	British
Michaelowski	(1975)	Violence in the road	USA
Macmillan	(1975)	Deviant drivers	UK
Turner et al	(1975)	Aggressive behaviour (field study)	USA
Hauber	(1980)	Social psychology of driving behaviour	Holland
Marsh and Collett	(1986)	Driving Passion	British

Table 2 Roadway Aggression Typology from Novaco (1991) .

	Target Location	Aggressor Location	Target Identity	Temporal Interval	Intentional Quality	Traffic relevance
Roadway shooting/throwing	inside (typically)	inside	anonymous	immediate	impulsive	yes
Assault with Vehicle	inside or outside	inside	anonymous or personal	immediate or delayed	impulsive	yes or no
'Sniper'/ Robber	inside	outside	anonymous	delayed	premeditated	yes
Drive-By Shootings	outside (typically)	inside	personal	delayed (typically)	premeditated	no
Suicide/Murder Crashes	inside	inside	personal	delayed	premeditated	no
Roadside Confrontation	outside	outside	anonymous	immediate	impulsive	yes

A number of cognitive distortions also appear to be engaged, so that such persons may respond violently to what would appear to most outside observers to be the innocuous behaviour of other drivers.² Anger is itself a response that occurs as a product of the pre-established beliefs and expectations of the individual. The way we think about ourselves and other road users and what are appropriate responses to driving situations shapes not only behaviour but also the emotion (anger) that many believe arises spontaneously. Bernard (1990) developed an application of Wolfgang and Ferracuti's theory to account for the high prevalence of "angry aggression" amongst the "truly disadvantaged". The key, according to Bernard (drawing on the work of Averill, 1982), is how the "rules of anger" are formed in the group. These rules instruct group members that in certain situations or interactions they "should" be angry. Anger, in this view, is largely a product of cultural beliefs and has meaning only within its particular social context. Rules developed in a specific group or culture also

² Cognitive distortions and attributional biases associated with men and boys who who develop a record of violence have been discussed by a number of theorists (e.g. Novaco and Welsh, 1989).

instruct members as to the appropriate response to an experience of anger. Anger contains within it, as Bernard argues, the belief that someone else has done something wrong in terms of the person getting angry and that this person is to blame and should be punished. In addition to determining anger, cultural rules also dictate the level and type of “punishment”, or violence, that must be delivered to the target to satisfy the needs of the person who is angered.

The beliefs which are relevant here in guiding violent behaviour are usually encapsulated by certain pre-set interaction sequences referred to by cognitive psychologists as “scripts”. The term “scripts” is most appropriate, because the predictability of the sequence is so well understood that it forms the basic theme of many crimes. As Cornish (1994) points out the way interactional sequences unfold seemingly with little variation and creativity on the part of the actors belies an overreliance on certain scripts.

It is also apparent that driving produces multiple disinhibitors to aggression and the prevention of violence. Novaco (1991: 304) notes:

The physiological arousal induced by driving a car, per se, as well as by exposure to thwartings in transit, contributes to the override of inhibitory factors in a context that is conducive to aggressive responding. Road violence is a product of weakened social controls and personal controls, which can act in concert with arousal-inducing environmental circumstances, such as traffic congestion, work pressures, or family strain.

Novaco further notes that the activation of physiological arousal systems increases the probability of impulsive behaviour by over-riding restraints and heightens the probability of aggression by constituting a precondition for anger. Stokols and Novaco (1981) found that chronic exposure to traffic congestion and traffic exposure in long distance commuting led to highly significant increases in baseline blood pressure, the lowering of frustration tolerance, increases in negative mood, and aggressive driving habits. Certainly, the idea that stress may contribute to the prevalence of driving related violence is consistent with the findings of the present study both in terms of the effects of long-term exposure (driving time/distance travelled) and in terms of particularly vulnerable time periods (afternoon rush hour).

Ellison et al. (1995) argued that anonymity facilitates aggression;

These situational categories of aggression interact with the individual factors. However, the most reliable predictors of roadway violence is the past violent history of the offender.³ Violence is generally linked to individual attributes of impulsivity, low tolerance of frustration and risk taking. Naturally, situational factors interact with individual variables so that both are needed to precipitate violence. However the catalysts in many cases are events that most people would consider trivial and commonplace aspects of traffic movement. High risk individuals not only contribute to a large proportion of road violence but also other road problems such as drink driving and traffic accidents. In this way individuals in these categories reduce the safety of the roads in a variety of ways.

Psychological factors that have been associated with violence are also risk factors for road accidents and drink driving, for example Novaco (1991, p.261) notes: "In this literature it had been found that accident repeaters had poor control of hostile impulses and have anti-social tendencies." The work on the generality of deviance (Gottfredson and Hirschi, 1990) supports the notion that 'high risk' individuals that have poor impulse control will have a greater chance of showing up with a record of violence, road accidents and drink driving. For example Ryan and colleagues (1997) found that those with more than one drink driving charge were more likely to have a criminal record on other charges.

To explore the relationship between general road offending and violent crime Parsons (1978) studied 1509 serious motoring offenders convicted through the courts in New Zealand from 1965 to 1969 and traced the offending pattern of each offender for up to 15 years. Parsons found that serious motoring offenders have the same socio-demographic characteristics as violent offenders generally (more likely to be young, male, unemployed etc). Parsons concluded that his research "clearly demonstrates that a strong positive relationship exists between serious motoring offending and offending of a violent, anti-social nature" (p. 7). Parsons argued that motoring offences were explained by an extension of the 'sub-culture of violence' thesis (Wolfgang and Feracutti, 1967):⁴

It is argued that the kind of person who has internalised lower class subcultural norms, who additionally lives by the values of the subculture of violence, and who accepts violence as a normal behaviour will carry over this behaviour to the driving situation and that 'accidents' for these people

³ Need to put in here studies that have demonstrated this link.

⁴ This thesis is that values and attitudes conducive to violence are inculcated in subcultural groups so that individuals living within the frame of such subcultures will be more likely to use violence as a routine way to transact difficulties and conflicts.

are not accidents but rather intended patterns of subcultural behaviour based on the subcultural values to which they subscribe.

Although other studies have framed these individual or personal variables in psychological terms (poor impulse control, low frustration tolerance etc). Parsons, by adopting Wolfgang and Feracutti's thesis frames it in a much more sociological way and suggests that violence on the road is a spill-over from cultural attitudes that exist in the community that accept and embrace the use of violence.

McCord (1984) also found that individuals with a history of anti-social behaviour were over-represented amongst drink drivers. McCord (1984) used a longitudinal design and found that those convicted of drink driving offences "were more likely to have reported getting into fights and to be more likely to act rather than talk when angry. Those convicted of DWI were more likely to have been convicted for serious crimes against property and against persons." (cited in Novaco, 1991). More recently, Ryan, Ferrante, Loh and Cercarelli (1996) have shown that the best predictors for repeat drink-driving are being male, being under 20 years of age, having prior arrests and being Aboriginal - a profile which also describes persons likely to be arrested again for a violent offence.

The over-representation of young men with aggressive driving behaviour and aggression on the road is found in a number of studies. For example, Macmillan (1975) found that a competitive approach to driving was associated with young males, as was accident risk. The AAMI (1996) survey of 602 motorists suggested that anger and aggression on the roads was widespread. Although most of the concern was with anger rather than aggression (let alone violence) this survey did reflect the expected finding that drivers in the 18-24 year old age group were more likely than others to be angry or exhibit 'road rage' behaviours. As young males are more likely to be high risk takers and have physical advantages, it is not surprising that this group is over-represented amongst violent offenders. It can be assumed that a certain proportion of the high rate of accidents in this group is also related to anger and aggression on the road although it will be hard to determine this proportion with any degree of accuracy.

Justifying violence

In his early study of roadway aggression Parry (1968) questioned 382 drivers in London. From this group 55 drivers with extreme scores on an index of aggression and anxiety were selected for detailed interviews. Parry found that these subjects give elaborate justifications for their aggression. He states:

Interview after interview with motorists brought forth expressions of justification for aggressive behaviour....Not one of the people interviewed in this category (high aggression, high anxiety) admitted that he was, in any way, the guilty party. Not one admitted to having learnt a lesson as a consequence of which he made a conscious effort towards becoming a better motorist. Almost all agreed that they would again do the same thing in like circumstances (p.34. cited in Novaco, 1991 p.257-258).

A belief system grounded in the view of a hostile and competitive world may create expectations of scenarios dominated by challenge and retaliation. [Better to cite Oliver - taking a world view into the roadway and then projects onto it]

The beliefs that are relevant here in guiding violent behaviour are usually encapsulated by certain pre-set interaction sequences referred to by cognitive psychologists as 'scripts'. Although most men can keep a proper perspective on this and eschew violence, for men without other means of establishing dominance or men who are seduced by the anonymity and competitive elements of driving the road may present itself as a screen upon which the violent/competitive script is played out.

Novaco (1991, p. 313) refers to this process when he notes:

Exposure to scripts which suggest or even legitimise violence have reduced inhibitions as well as programmed the mind with mental images. The modeling effects of media portrayals of violence surely are not irrelevant.

Conclusion

Two elements concerning driving related violence which are central in understanding its genesis and prevention. Firstly driving related violence needs to be seen as another form of violence and shares the same basic psychological and sociological features as other criminal violence. It is important to understand this because it means that this violence is not excusable and is not somehow attributable to modern road design, traffic congestion or bad drivers. Like other forms of violence it is directly attributable to the thoughts, attitudes and beliefs of the perpetrator and this should be the main focus of prevention and criminal justice responses. The second element is that there are a number of different aspects which can influence the likelihood that violence will be chosen by the perpetrator as a solution to a perceived problem. Having firmly established the first element of perpetrator responsibility, these other disinhibitory elements can be viewed as possible other sites through which violence can be prevented.

This view that roadway aggression and violence should be seen to be the result of an interaction of at least two of the following five variables:

1. Physiological arousal related to stress anger or both.
2. An individual with a relatively high degree of impulsivity and/or low frustration tolerance.
3. A situation that presents a frustration or challenge to the status of the perpetrator.
4. A belief system or 'aggressive script' that excuses or justifies violence.
5. A model or suggested course of action that may be derived from observing similar scenarios in the media or in real life.

Each of the elements that create an element of risk also provide an opportunity for prevention. I will discuss two of these below.

3. Triggers for road rage.

Drawing on the narrative section of offence report forms, accounts from their own respondents and a few law reports, it was possible for Harding et al., (1998) to begin to identify some common triggers for these incidents. Five types of situation were isolated:

- encounters with slow drivers;
- other drivers cutting in or overtaking;
- stereotyped sex roles - attributions of driving incompetence by males in relation to females;
- accidents between vehicles; and
- competition for parking space.

[i] *Slow drivers.*

The rules of the road as constructed in the driving culture do not necessarily correspond to the formal laws as set down in road traffic legislation. The tacit, situationally negotiated rules of driving legitimate a robust driving style aimed at reducing travel time, decisively negotiating barriers to movement and keeping traffic moving. Additional pressures, such as being late for work or meeting family obligations, frequently add to the tensions between the formal law, on the one hand, and traffic expectations on the other. Aggression can be the result of offence taken by certain individuals when these tacit rules or the concern with "flow" is not adhered to.

[ii] *Cutting in and overtaking.*

Because such situations readily beget perceptions of ascendancy/descendancy they can result in status contests, which, as noted earlier, are so often associated with interpersonal violence.

[iii] *Stereotyped sex roles and attributions of driving incompetence.*

A number of case narratives show male drivers assaulting females who they believe have transgressed the tacit (masculine) rules of the road - in particular, failure to move decisively into traffic. In such situations, male feelings about females or feminists as such not infrequently emerge.

[iv] *Traffic accidents.* Stakes are high and the sense of aggrievement is high.

[v] *Parking.*, limited resource and the rules of engagement often cloudy.

Five specific areas of influence where prevention efforts can be focused.

1. Reducing stress on the roads

Prevention efforts need to be tuned to relieving stress and fatigue on the road. Perhaps most importantly drivers need to be educated to recognise the signs of stress and fatigue so that they can take measures to address them including getting off the road if the symptoms are severe enough. As a general preventive concern, we need to be aware of our increasing reliance on the motor vehicle and the likelihood that urban congestion will increase and trip-times will become longer. Consequently, we should expect some increase in the number of violent incidents, even when the underlying level of aggressivity and propensity for violence remains constant.

2. Screening, monitoring and removing violent individuals.

Some types of individuals, and certain individuals in particular, are a risk on the road. These individuals are a risk not only in terms of road violence but also in relation to drink driving and road crashes. This recognition may entail the development of intervention strategies such as licence suspension or special training or anger management programmes. This should perhaps not be conceptualised as punishment of the driver as much as for the protection and safety of other road users.

That violent offenders are more likely to exhibit aggression on the road suggests an important role for the criminal justice system in helping to prevent not only driving related violence but other forms of violence. A violent offence on the

road might be the first or one in a series of violent offences in the career of a violent offender. Intervention may have the potential of alerting the perpetrator to how his ways of thinking leads to violence. It was noted (Harding et al., 1998), that in many of the incidents reviewed, complainants (victims) did not want to proceed with the complaint because of the inconvenience of appearing in court or other reasons. Police were also often reluctant to proceed in many cases and often classified them as 'civil' disputes. One possible remedy to the situation in which an offender 'gets away' with road violence is to offer the offender the option of an on-the-spot fine and/or attendance at a half day education session on controlling anger and preventing the use of violence.

3. Preventing frustrating situations.

As far as possible road designers need to consider the psychological component of driving and design mechanisms that will reduce the frequency of potentially frustrating situations. These might include the prevention of against the traffic turns off major roads by, for example, building concrete median strips. Preventing against the traffic turns at traffic signals also may be appropriate in some instances.

4. Preventing excuses for violence.

Young drivers, particularly males, represent a high risk group, who may think that the road rules are so important that the people who violate them are legitimate targets of abuse. New drivers, along with the experienced, need to learn that driving is a public and social behaviour and that pro-social behaviour is part of good driving. Radio talk-back shows, media presentations and other sources that tacitly reinforce the justifications for anger, aggression and violence need to be seen as directly contributing to the problem rather than the solution.

5. Imitation.

Perhaps through the use of media campaigns, good driving practices including moderate behaviour could be modelled. The development of a civil code that gives specific instruction about behavioural expectations on the road would be a help here.

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ⁱ The term “truly disadvantaged” derives from Wilson’s (1987) analysis of the underclass in the United States. The “truly disadvantaged” are considered to be a specific group suffering multiple social and economic deprivations and restraints.