HIGH SPEED POLICE PURSUITS IN PERTH

A Report to the Police Department of Western Australia

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Disclaimer: The views expressed in this report are those of the author, and do not necessarily represent those of the WA Police Service or of its officers or employees.

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SUMMARY

The Literature on High Speed Pursuits

1. In the U.S. literature, high speed pursuits are likened to the use of "deadly force." Some argue that the patrol car is the deadliest weapon in the police arsenal.

2. In most jurisdictions, traffic offences are the most common reasons for calling a pursuit. It is rare that offenders charged with serious crimes such as armed robbery are apprehended through pursuits. In practice, most pursuits take place because of the suspicion that the offender might be hiding something serious.

3. The deterrent value of high speed pursuits is not known.

4. There is unanimity in the literature that police departments require comprehensive written guidelines on high speed pursuits.

5. Many authors emphasise the need for training to go beyond physical driving skills to encompass attitudes, understanding, and decision making skills.

6. The individual officer should be held accountable in all cases for his or her actions, despite variations between jurisdictions in laws governing the vicarious liability of the Commissioner.

7. Forcible stopping techniques increase the apprehension rate at the cost of more accidents. Their use is generally prohibited or restricted to life threatening situations.

Police Attitudes in Perth

8. Traffic offences do not justify high speed pursuits, but stolen vehicles do. However, in every case it's who you might catch or what you might find that justifies pursuing.

9. The courts (especially the juvenile court) are far too lenient.

10. Officers say they do not enjoy doing pursuits.

11. The power to employ forcible stopping techniques should be granted.

12. Officers are aware that they are individually accountable at law for their driving and for public safety in pursuit situations.

13. Officers had a strong sense of self-preservation.

14. The rate of catching offenders is only 50% because police care about safety (safety is automatic).

15. If pursuits were to be restricted, there would be a big increase in the number of stolen vehicles and other offences.
16. Written guidelines which were more restrictive than the current regulations would be written by senior officers who are "out of touch with reality," and would not work in practice.

The Number of Pursuits

17. A total of 346 pursuits were recorded at Traffic Branch between January 1 and June 30, 1990, the period of the study. This is slightly fewer than the number recorded by Communications Branch.

18. A comparison with Police Accident Records shows that pursuits in which a police vehicle was damaged were 20% under-recorded on the High Speed pursuit forms. It is not known whether this under-recording rate applies to all pursuits.

19. On a per capita basis, there are many more pursuits in Perth than in Adelaide, and about 36% more than in Sydney.

20. The number of pursuits in Perth has increased over the past two years, but seemed reasonably steady during 1989/90. The number of pursuits involving damage to police vehicles increased during the first six months of 1990 compared with the previous six months.

21. There is no relationship between media publicity and the number of pursuits. The Tonkin Highway disaster perhaps caused a reduction in the number of pursuits for a few days.

Descriptive Analysis of Pursuits

22. Most pursuits took place on bitumen roads with good surfaces, in light traffic and in fine weather, and 80% took place at night.

23. The median duration was three minutes. The longest pursuit was 62 minutes.

24. In 43.6% of pursuits, only one police vehicle was recorded as being in pursuit. In 22.3% of cases, three or more police vehicles were recorded.

25. In 96.4% of pursuits, the primary vehicle was assigned to Category B. Only 1.2% and 2.4% were assigned to Categories A and C respectively. Most support vehicles were assigned to Category C.

26. In 51.2% of pursuits, the reason for chasing was not recorded. In cases where the reason was recorded, traffic offences gave rise to the pursuit in 50.1% of cases, and "stolen vehicle observed" in 22.5% of cases.

27. Provocation by offenders at the beginning of a pursuit was recorded very rarely (6 cases).

28. General duties vans were involved as primary pursuit vehicles in 39.6% of pursuits, followed by traffic (38.2%) and Division 79 (11.3%).

29. The median age of police drivers was 27. Only 3 were female.
30. 51.7% of drivers were pursuit trained: 11.4% of general duties, 86.1% of traffic, 54.1% of Division 79, and 64.7% of the remainder.

31. The median maximum speed was 130 km/h, a higher figure than South Australia (115 km/h) and Michigan (112 km/h).

32. Offenders were apprehended in 50.6% of pursuits, a lower rate than in South Australia or the U.S. In 19.4% of cases offenders were apprehended without an accident.

33. Only 2.5% of pursuits were terminated by the police driver, and 6.4% by the Headquarters Duty Inspector. However, these figures are slight under-estimates, since in some cases other events occurred very soon afterwards (such as an accident) which would have been accorded priority in the statistics.

34. Voluntary terminations by the offender were very uncommon, in contrast to the U.S.

35. There was a crash in 34.1% of cases, and damage was deliberately caused by offenders in 7.8% of cases. These rates are comparable with the U.S., but higher than South Australia.

36. When there was a crash, the offender’s vehicle was nearly always damaged (33.2% of all pursuits).

37. A police vehicle was damaged in 15.0% of pursuits (excluding most “nil damage” cases). Police involvement in pursuit-related accidents is increasing at about 20% per annum.

38. Every time the buzzer goes off in Communications Branch, announcing a pursuit, it costs the community an average of $226 in direct damage to police vehicles. The estimated average total cost of each pursuit is about $1,000, or a total of roughly $700,000 per annum.

39. Injuries or deaths occurred in 6.6% of cases, which is higher than South Australia and Sydney (around 4%) but lower than some U.S. studies.

40. One police officer was injured in 2 pursuits, and 3 pursuits involved injuries to 2 officers. A total of 8 police were injured in the study period, compared with 21 offenders and 3 other persons.

41. Medical attention or hospitalisation was required in all but 3 injury cases.

The Offenders

42. 272 offenders were apprehended at the time of the pursuit during the study period. Of these, 56.3% were drivers.

43. The 272 offenders generated 754 charges, an average of 2.77 per offender.

44. The median age of drivers was 20, and of all offenders was 17 (the same as motor vehicle theft offenders).
45. 8.1% of offenders were female, nearly always passengers.

46. Aborigines comprised 38.2% of all offenders (41.2% of the drivers). Aboriginals aged 10-19 comprise 4% of the total population in that age range in WA, so the rate of over-representation is about 10:1.

47. Offenders tried to damage or injure police in 12.1% of pursuits, and in 9.8% of cases, other motorists were forced to take evasive action because of the actions of the offenders.

48. When the status of the offender's vehicle was known, 70.1% were stolen. This is a higher figure than South Australia or U.S. jurisdictions.

49. Fewer than one apprehended driver in four (22.9%) was charged with drinking and driving. This is low in comparison with other places.

50. The most common charges were reckless driving and fail to stop. More than half of apprehended drivers were charged with driving unlicenced.

51. There are two groups of pursuits: those involving car thieves and those involving traffic/drink-drive offenders. Those involving car thieves take place 2.3 times more often than those involving traffic offenders: car thieves generate 70% of pursuits, traffic offenders 30%. Car thieves are more likely to be charged with assault when apprehended than the traffic offenders, but the overall incidence of violence is low. Car thieves commit traffic offences and sometimes other stealing offences, but traffic offenders are nearly always charged only with traffic offences.

Factors Related to Accidents and to the Apprehension of Offenders

52. There is a two thirds chance of damage when the reason for pursuing is a crime event or a stolen vehicle, compared with less than a one third chance when the initial reason for the pursuit is a traffic offence.

53. Serious accidents occurred in 32.0% of pursuits in wet weather, compared with 14.4% in fine conditions. The small number of pursuits that went onto gravel roads also had elevated crash rates.

54. The duration of the pursuit and the maximum speed attained were not generally related to the probability of an accident. The higher the maximum speed, the greater was the damage to police vehicles when a police accident occurred, but maximum speed was not correlated with the probability of a police accident occurring.

55. Pursuit trained drivers had more accidents than non-pursuit trained drivers, especially those involving police vehicles.

56. Pursuit trained drivers were more likely to continue pursuing when the offenders were aborigines, when other motorists had to take evasive action, and when the offenders attempted to ram or otherwise damage the police vehicle. These factors (particularly the last) explain their worse accident record.
57. Training is irrelevant to the outcome of a pursuit, no matter how many factors are included in a statistical model in an attempt to equalise statistically the kinds of pursuits which trained and non-trained drivers engage in.

58. Accidents of all kind are more likely when motorists are forced to take evasive action (for example, the risk of a serious accident is increased from 12.8% to 36.7%).

59. Offenders are more likely to be apprehended when they are pursued despite their dangerous driving.

60. An accident is much more likely to occur in cases in which an offender is apprehended.

61. Pursuits involving several aboriginal offenders were generally wilder and more violent than other pursuits. The Tonkin Highway disaster is simply the most extreme manifestation of this pattern.

62. Offenders had a better chance of getting away when they were driving newer, more powerful vehicles (not including motorcycles).

63. Even in cases in which offenders do not succeed in their attempts to cause damage to the police, the outcome of the pursuit is much more likely to be an accident.

64. Chasing traffic offenders is safer than chasing motor vehicle thieves because the latter group try to damage police vehicles and they drive in an erratic manner dangerous to other road users. Chasing stolen vehicles could be made safer by aborting pursuits when either of these two events occur, in which case chasing because of traffic offences or because of a crime in progress would become the most risky categories.
RECOMMENDATIONS

Pursuit Policy and Guidelines

*It is recommended that:*

1. For a period of three months the Department cease high speed pursuits when the only offences known to have been committed are traffic violations. The effects of this policy on motor vehicle theft rates, speeding and drink-driving offence rates, and on traffic crashes and injuries, should be evaluated scientifically. (p. 70).

2. The High Speed Pursuits Taskforce be charged with the responsibility of developing further the written guidelines governing high speed pursuits. Particular attention should be paid to the risk factors analysed in this report. (p. 71).

3. It is recommended that the guidelines incorporate the elements identified by Shuman and Kennedy (1989) as usually missing from police pursuit policies: (1) the mission statement of the WA Police Service; (2) the need for the supervisor to deal with the “psychological aspects” of pursuits; (3) how to terminate a pursuit; and (4) mandatory administrative review of all high speed pursuits. (p. 71).

4. It is further recommended that the Taskforce heed Murray’s (1987) emphasis on working with junior officers in the formulation of the guidelines and the need to incorporate a strong educative component so that officers understand the reasons for the guidelines. (p. 71).

5. Through modifications to the guidelines, through training, or through other means deemed appropriate (such as an automatic vehicle location system), senior management take steps to eliminate “caravanning.” In particular, the proper role of support vehicles (vehicles other than the primary pursuit car and the backup) should be clarified. (p. 35).

6. The Department study Donohue’s (1990) recommendations concerning road safety indicators, targets, and education within the Police Service, and develop road safety policies suitable to the situation in Western Australia. (p. 49).

7. Police should in all cases be required to carry out a preliminary breath test on drivers apprehended as a result of high speed pursuits. This should be followed by breath analysis when appropriate. (p. 56).

8. Category B pursuits should not be carried out in wet weather, and they should be aborted by the driver as soon as gravel or off-road conditions are encountered. (p. 60).

9. Current restrictions on the use of forcible stopping techniques in Western Australia should be retained. (p. 61).
Training

It is recommended that:

10. The training program on the theory of high speed police pursuits conducted by Traffic Branch be expanded to at least a three day course, and that it be made mandatory, over time, that all officers who may be engaged in high speed pursuits attend. This course should cover the present material, as well as relevant research on pursuits, and should emphasise the understanding of the expanded written guidelines developed by the High Speed Pursuits Taskforce. (p. 71).

11. Techniques for tailing motorists which minimise the chances that police action will precipitate a pursuit be given explicit attention in the pursuit training sessions. (p. 36).

12. Training sessions examine the problem of offender provocation, and a range of alternatives to a high speed pursuit be developed for apprehending the offenders. (p. 37).

13. Police officers should be appraised in training sessions of the direct connection between maximum speeds and the amount of damage caused in police accidents, but no arbitrary speed limits should be imposed for high speed pursuits. (p. 62).

Record Keeping

It is recommended that:

14. Police Accident Records be provided as soon as possible with a micro computer so that a computerised data base of police accident data can be established. The Section should be required to provided detailed and regular reports on trends in accident costs (at least monthly), so that remedial action can be taken to prevent accidents before the costs are incurred. (p. 49).

15. The High Speed pursuit form be revised along lines recommended by the High Speed Pursuits Taskforce and Traffic Branch, and that the information on these forms be computerised so that trends and patterns in pursuits can be quickly identified. It is also recommended that this data base be linked with the computerised data base which should be developed by the Police Accident Records Section, and that the High Speed pursuit records be used as a basis for the mandatory administrative review of all pursuits. (p. 71).

16. The Commissioner direct that a High Speed Pursuit form must be completed by all officers who call a pursuit, no matter how brief the chase and regardless of the outcome. The value of information on pursuits for management purposes should be emphasised, so that officers understand the reasons for completing a form. (p. 22).

17. The High Speed pursuit form be amended to require information about the reason for the pursuit in explicit form. If "suspicion" is the reason for initially tailing a motorist, the nature of the suspicious circumstances should
be spelled out. (p. 35).

The Aboriginal Community

*It is recommended that:*

18. The Department should continue its support for and development of programs which improve relationships with the aboriginal community and prevent aboriginal youth from coming into conflict with police. Aboriginal driver training programs should be a priority, so that aborigines may obtain a licence and learn the basics of traffic laws and safe driving practices. In order to achieve these ends, it is recommended that the Department develop close working relationships with other relevant government departments. (p. 66).
INTRODUCTION AND ACKNOWLEDGEMENTS

This project grew out of a request by senior officers of the Western Australia Police Service for information on motor vehicle theft and high speed police pursuits in Perth.

Western Australia has a high rate of motor vehicle theft - not as high as New South Wales, but as high or higher than most other states. A significant number of motor vehicles thieves are chased at one time or another by police, usually after the vehicle they are driving has been recognised as stolen by a police officer. In fact, the best evidence I have been able to assemble suggests that something like 70% of all chases involve a stolen vehicle. There is therefore a close connection between police pursuits and motor vehicle theft.

However, preliminary investigation of the issues and sources of information quickly convinced me that it would be impossible in the two months period available for the project to do justice to both topics. Although a high proportion of pursuits involve stolen vehicles, the vast majority of stolen motor vehicles are not recoved in this manner. Pursuits number about 700 a year in Perth at the moment, and offenders are apprehended in only about half of these cases and not all are charged with stealing offences.

By contrast, in 1988/89 throughout the state there were 3,806 arrests for unauthorised use of a motor vehicle (UUMV), unlawfully driving a motor vehicle (UDMV), or interfering with the parts of a motor vehicle, and 15,509 vehicles were reported stolen. Moreover, the prevention of motor vehicle theft raises complex issues of security, vehicle design, environmental modifications, and proactive policing, which are quite different from the specific dilemmas posed by high speed pursuits, perhaps the most "reactive" of all forms of policing.

After considering a brief paper in which I set out the issues which, in my view, could be investigated on a practical basis, the Police Executive opted to focus on the topic of high speed pursuits. In discussion, I was asked, if possible, to do some research on the offenders involved in the thefts and pursuits. It was further indicated to me during the course of the project that the Department would be very interested in factors related to accidents which take place as a result of pursuits, particularly accidents involving police vehicles.

One reason why the topic of pursuits is a researchable issue is the existence of forms which are completed by police in most cases when a pursuit is called. From these forms it is possible to extract a wide variety of data which are of a quality not apparently available in most other jurisdictions within Australia or overseas. The WA Police Department is to be congratulated for maintaining this data base and making it available for analysis.

Aims of the Research

Given the background described above, the overall aim of the research was:

To define the nature and dimensions of the problem of high speed pursuits in Perth and to carry out data analyses to aid in the better management of
pursuits by police.

Specific objectives included:

(a) Analysis of the number of pursuits and the influence of the media;

(b) The identification of factors related to the occurrence of some kind of damage or injury (including damage inflicted deliberately by offenders) during or at the end of a pursuit;

(c) The identification of factors related to the occurrence of a serious accident. ("Serious accidents" excluded incidents in which damage was deliberately inflicted by offenders, but included most cases of injury or serious property damage accidentally caused.)

(d) The identification of factors related to the damage of a police vehicle, and the identification of factors predictive of the amount of damage.

(d) The identification of factors related to the apprehension of offenders, with specific reference to the question of whether there is conflict between these factors and those predictive of accidents.

(e) The investigation of the characteristics, attitudes and criminal and traffic records of offenders involved in pursuits;

(f) The investigation of police perceptions of pursuits, why they take place, and attitudes to their management.

(g) On the basis of the statistical and interview data, to make some recommendations concerning the management of pursuits, with a view to minimising the conflict between the police duty to apprehend offenders and the primary objective of the Police Service of protecting life and property.

Data Sources

The methods of data collection used in the study are implicit in the aims as set out above.

(a) Detailed analysis of police records of pursuits. Whenever a pursuit is called over the radio, a form is completed by the Communications Duty Inspector. In addition, officers are required to complete a high speed pursuit form for every pursuit, and submit it to Traffic Branch. These data sources, although apparently not complete, have been analysed for the period January 1, 1990 to June 30, 1990.

(b) Interviews and two focus group discussions with police officers, and two observation sessions at Communications. The focus groups were conducted with 7 officers from Traffic Branch, and 7 from Division 79. All officers involved had been engaged recently in high speed pursuits.

(c) In-depth interviews with 10 juvenile offenders who had been involved in high speed pursuits in the study period and who were either in custody or on conditional release orders.
(d) Analysis of the age, race, sex and the date and nature of previous charges of all offenders apprehended in high speed pursuits in the study period. This information was obtained from the Central Names Index data file on the Police computer.

The Scope of This Report

This report concentrates on the information collected using method (a), referring in a more limited way to the other data sources. This restriction came about as a result of the limited time available for the study. A later report will include a detailed analysis of the offender and interview data.

It has been possible to achieve the major objectives of the study despite this limitation in the scope of the report.

Acknowledgements

Despite the narrowing of the research topic to pursuits, the scope of the study is still very wide. Anyone who has conducted research involving a number of different kinds of data collection knows how much time is required, particularly when human subjects are involved. The present project would have been much more limited in scope without the assistance of a large number of people.

Staff of the Research and Statistics Section have provided invaluable support. Gavin Maisey, who was responsible for initiating the research, acted as link with the Department and made the time of his staff available. Sue Williams and Melissa Baxter spent many days entering data onto the computer, while Rob Van Brakel helped to design the pursuit data base, edited the data, and produced a large number of tables.

Tony O'Donoghue of the Police Policy Section provided valuable information, encouragement and resources.

Graham Whitney, of the Computing and Information Management Branch, provided printouts on motor vehicle theft and the offenders, and laboured to match the names of offenders listed on the pursuit forms with the names on the Central Names Index so that an analysis could be done of the offenders' records.

Inspector Bob Kucera introduced me to many key police personnel, facilitated my movement throughout the Department, and also provided me with valuable insights into police operations. Sergeant Barry Ellis and his staff at Police Accident Records gave unstintingly of their time in helping me to assess police damage in pursuits and to understand the police system of recording accidents. Many other police officers, including Ron Parry, Lyn Sergeant, Dale Patterson, Ray Sharkey, John Grant, and a number of others too numerous to thank individually, provided me with valuable information and help.

Inspector Steve Ireland of the NSW Police Service has been thinking about high speed police pursuits for some years, and I am indebted to him for sending me a mass of literature as well as for sharing with me the benefits of his experience in this field. I should also like to thank Sue Netterfield,
Director of the Marketing, Statistics and Evaluation Branch of the NSW Police, for making available to me a copy of a recent report on police pursuits and urgent duty produced by a consultant.

Outside Police Departments, I received great assistance from Bill Budelisik and Paul Rajan of the Department of Community Services. Without their help I would have had a poorer understanding of how the juvenile justice system works in WA, and it would have been impossible for me to have had the direct contact with offenders which has added so much to my own knowledge of the problem. Staff in particular DCS institutions also gave me valuable assistance in locating and interviewing offenders, and I acknowledge their help with gratitude.

Dr. John Kleinig, from the John Jay College of Criminal Justice, kindly gave me a copy of some lecture notes on the ethical aspects of police pursuits, and provided useful insights into the problem. Dr. Don Carseldine, from the Roads and Traffic Authority in Sydney, provided useful information on the literature on advanced driver training.

Early in the project I attempted to line up interviews with motor vehicle theft offenders who are not currently in custody. Bev Jowell and Steve McKinnon, youth workers with Balga Presbyterian Church which runs Arrest Express, a service for youth detained by the police, attempted to organise some contacts, but unfortunately some problems, and the limited time available to me, prevented this from happening. These workers nevertheless provided me with much useful information, and I appreciate the efforts they made to introduce me to offenders.

While in Perth, I have been a Visiting Senior Research Fellow at the National Centre for Research into the Prevention of Drug Abuse. The Centre has continued to support my work during the course of this project, despite the fact that the topic is somewhat outside their charter (although as I show in a later section, drug and alcohol impairment of offenders is a major issue). The Centre has provided an office, computer, phone and other facilities, and, even more important, has created an atmosphere of collegial support and encouragement. I am extremely grateful to the Director of the Centre, Professor David Hawks, and to other staff, for providing this support.

Finally, I would like to express my appreciation to members of the Police Executive for giving me the opportunity to work on this important topic. Their help and encouragement is appreciated.
THE ISSUES

Alpert (1987) defines a police pursuit in the following way:

A police pursuit is an active attempt by a law enforcement officer operating a vehicle with emergency equipment to apprehend a suspected law violator in a motor vehicle, when the driver of the vehicle attempts to avoid apprehension. (p. 299).

In Western Australia, the term “high speed pursuit” is most commonly used, although in fact a number of pursuits which police call over the radio do not involve speeds much in excess of the prevailing speed limit. Perhaps a better term is “hot pursuit,” since it contains the idea of a determined effort to apprehend an offender without referring explicitly to speeds. However, given the common usage, in this report we will use the term “high speed pursuit.”

The overall Mission Statement of the Western Australia Police Department refers to the preservation of the Queen’s Peace, that is, law and order. A major objective in carrying out this mission is to “maximise the protection of life and property” (Western Australia Police Department, 1990). Towards this end, the Commissioner has identified ten goals. Two of these are:

2. To improve traffic safety and minimise the incidence of vehicle accidents.

3. To investigate crimes to the extent that the highest possible clearance rate is achieved.

(Western Australia Police Department, 1990, p. 4)

High speed police pursuits involve, in many instances, a direct conflict between these two goals.

On the one hand, the police constable has a duty to apprehend offenders, and is enjoined to do so to the best of his or her abilities according to Goal 3 quoted above. The rule of law requires as a fundamental principle that those who break the law be brought to justice.

On the other hand, high speed police pursuits pose, by their very nature, a grave threat to the safety of motorists - police, offenders, and uninvolved third parties. The spectacular crash on the Tonkin Highway during the early hours of April 5, 1990, in which three aboriginal young people were killed and a passing motorist so severely injured that he subsequently died, dramatised for the community the risks which are inherent in all high speed pursuits.

As Kleini (1990) puts it:

It is the danger they pose to life and limb which gives hot pursuits their morally problematic character. What is therefore needed to justify them will be some proportionate good. (p. 5).

The major purpose of this report is to present data which will assist the Department in coming to terms with the moral dilemma posed by every high speed pursuit.
The Australian and International Literature

There are surprisingly few empirical studies of high speed pursuits along the lines of the present report (Alpert, 1987). Three or four American studies, a study by Murray (1987) in South Australia, and some recent work by Donohue (1990) in NSW, constitute most of the available research. Many commentators deplore this situation, and recommend that police departments construct reliable data bases on high speed pursuits as soon as possible (Beckman, 1983). Fortunately, Western Australia has done this.

The empirical literature will be referred to, as appropriate, throughout this report. In the present section, the rather larger literature on the philosophical and policy issues will be reviewed briefly.

The concept of "deadly force." Shuman and Kennedy (1989) cite U.S. surveys which suggest that pursuit driving situations result in more deaths and injuries than any other law enforcement activity, including the use of firearms. Auten (1985) and most other American commentators draw a direct parallel between the use of firearms and the use of motor vehicles in pursuits, arguing that both situations entail the use of deadly force, defined as "force likely to cause death or great bodily harm" (Auten, p. 16). Shuman and Kennedy suggest that the patrol car is not only a form of deadly force, it is the deadliest weapon in the police arsenal.

Justifications for pursuing at high speeds. All the empirical studies are in agreement that traffic offences are by far the most common events preceding a pursuit, and in many cases no charges more serious than traffic offences are preferred against the fleeing motorist. Frequently suspicion of some kind, without the commission of any formal offence, is the starting point. Stolen motor vehicles seem to figure in only a minority of pursuits in the United States and in other parts of Australia (Donohue, 1990; Fyfe, 1990; Murray, 1987), and only in a very small proportion of cases are the offenders charged with serious crimes such as armed robbery, rape, or serious assault (Auten, 1985; Fyfe, 1990; Murray, 1987). In the period covered by this study of Perth pursuits, it appears that no such charges were laid.

A common theme in the literature is that the motorist's act of fleeing from police is the real reason for a pursuit getting started, and his behaviour during the pursuit is the reason for the pursuit continuing (Auten, 1988; Fyfe, 1990; Hogg, 1988). As Fyfe observes, motorists who refuse to stop give officers what are, in effect, "unexpected slaps in the face" (p. 117).

When this happens, the motorist's flight becomes a personal challenge, and officers may risk themselves, those they pursue, and uninvolved motorists and pedestrians during reckless pursuits of people who turn out to be nothing more than panic stricken young traffic violators. (Fyfe, 1990, p. 119).

Fyfe is not alone in expressing concern about the motivations behind many high speed pursuits. For example, in an earlier paper, Beckman (1983) expresses the problem in forceful terms:

... one must seriously question the prolonged, high-speed pursuit of a traffic violator, misdemeanor, or non-violent felon. There is always the speculation that the minor violator who flees may have something else to hide. He may. He most
often does not. In either case, society is not served by the killing or maiming of a third party to effect his capture (Beckman, 1983, p. 36).

It is this aspect of the problem of high speed pursuits which has attracted much of the attention of committees of enquiry in various jurisdictions. In Australia, the Staysafe Parliamentary Committee in NSW (Parliament of NSW, 1985) expressed frustration at the lack of reliable information on this critical issue. A Committee set up by the Solicitor General in Ontario, Canada, concluded that given the generally disproportionate relationship between the hazards involved in pursuits and the gravity of the crimes with which offenders are charged, many of the pursuits permitted at that time in Ontario should not occur (Ontario Solicitor General’s Special Committee on Police Pursuit, 1985).

**The deterrent value of pursuits.** Fundamental to the police point of view is the belief that without the unfettered right to pursue as the situation dictates, there would be an epidemic of car stealing, traffic offences, and other kinds of crimes (Alpert, 1987; Beckman, 1983). While there may be truth in this position, it should be recognised that it is an unproven assertion. Extensive research on traffic law enforcement (Homel & Wilson, 1987; Homel, 1988) suggests that deterrence is a function of the *perceived probability of apprehension*, and that traditional traffic law enforcement strategies which focus on the apprehension of offenders do not have much deterrent value.

The frequency with which the same names recur in lists of offenders involved in pursuits (McGrath, 1988) suggests that they have little specific deterrent value, although it is possible that some potential offenders are deterred from offences like car stealing by the thought of a police chase. With rare exceptions like random breath testing, which has been shown to be an extremely powerful general deterrent (Homel, 1988), the deterrent effects of most strategies of law enforcement, including pursuits, are simply unknown.

**Written guidelines for pursuits.** Apart from a desire to draw attention to the great risks entailed in pursuits, the main reason most authors draw an analogy between the firearm and the pursuit vehicle is to make a case for comprehensive written policies. Shuman and Kennedy argue, for example, that in the United States the reams of paperwork required from an officer who discharges a firearm while on duty, together with the formal administrative reviews required, have effected a marked reduction in the number of police killings and injuries, with fewer officers being shot in the line of duty. Fyfe (1990), in a recent overview of the problem of pursuits, argues strongly for a clearly articulated departmental policy on high speed pursuit, claiming that “the agency that does not have and abide by such a policy is simply not doing all it should to protect lives and property.” (p. 122).

*Written guidelines go much further than statutes or Road Traffic Codes dealing with exemptions for emergency vehicles (NSW Police Service, undated). They deal with such issues as:*

1. when to initiate a pursuit;
2. number of units permitted;
3. responsibilities of primary and secondary units;
4. driving tactics;
5. helicopter assistance;
6. communications;
7. capture;
8. discontinuance of pursuit;
9. supervisory
responsibilities; (10) firearms use; (11) offense categories - traffic misdemeanors, felonies (types and differing seriousness); (12) blocking, ramming, boxing, roadblocks; (13) absolute speed limits; (14) interjurisdictional considerations [hardly relevant in WA!]; (15) conditions of vehicle, driver, roadway, weather, traffic; (16) hazards to users of highway; and (17) reporting and post-pursuit analysis. (Beckman, 1983, p. 36).

Alpert (1987) classifies departmental regulations as (1) judgemental - allowing officers to make all major decisions; or (2) restrictive - placing certain restrictions on officers' discretion; or (3) discouragement - only permitting pursuits in the most extreme situations. At the present time, most Australian police departments, including Western Australia, have only the beginnings of written regulations or policies, and they are mostly toward the "judgemental" end of the spectrum.

In a comprehensive analysis of the situation in South Australia, Murray (1987) has proposed a blend of "open/educative and restrictive policy for pursuits" (p. 46). He emphasises that given what is known of police culture, rigid and arbitrary rules and regulations imposed from above are likely to be resisted, subverted, or circumvented. He therefore advocates an educational approach, making a rational appeal to the sensibilities of police officers, spelling out and communicating management philosophies and the information on which they are based, but all within a framework which gives priority to safety.

**Police training.** Most commentators emphasise the need for police training, but distinguish, on the one hand, between skill development and complex techniques for pursuits on the one hand, and the development of correct attitudes and decision making strategies on the other (Abbott, 1988; Buckley, 1987).

Technical skills include vehicle placement, defensive driving, skid control, and so on, while attitude training covers many of the issues in the quotation from Beckman (1983) above. If a department has a written policy or set of guidelines on pursuits, attitude training consists largely of communicating the details of the guidelines and the principles underlying it. Several authors emphasise the critical educative role of mandatory post-pursuit reviews, both at the individual and departmental levels (O'Keefe, 1989; Shuman & Kennedy, 1989).

**Individual accountability.** In the United States, police departments can be held responsible for the actions of their officers, and in some instances law suits arising out of high speed pursuits in which a police officer has killed an innocent party have bankrupted local communities (Shuman & Kennedy, 1989).

The question of *vicarious liability* in Australia is more complex. In New South Wales the Law Reform (Vicarious Liability) Act. (1983) makes the Commissioner vicariously liable for the negligent actions of constables (NSW Police Service, undated), but does not in any way protect members of the Service from charges arising out of their negligent actions. In Western Australia there is no equivalent of the NSW Act, but Common Law places a general duty of care upon all road users, including police officers. Ultimately officers are accountable, at law, for their actions, despite the exemptions afforded to police to enable them to operate emergency vehicles at speeds in
excess of the speed limit.

Murray (1987) emphasises that accountability through coronial enquiries, judicial or parliamentary review, or through some external board of enquiry such as that proposed by the NSW Staysafe Committee, is nowhere near as effective as informal controls within the force. These include such things as the discretion of the supervisor to allocate duties, shifts or postings and to discipline in front of peers.

**Forcible stopping techniques.** Some of the literature is in support of devices such as "hollow spikes" which can deflate a vehicle's tyres without, it is claimed, causing an accident (Ontario Solicitor General's Special Committee on Police Pursuit, 1985). However, there is a consensus that forcible stopping techniques such as overtaking, roadblocks, ramming, "boxing in", and so on, should only be used as a last resort when life is threatened (Auten, 1985; Fyfe, 1990; Murray, 1987). Such techniques increase the apprehension rate, but at the cost of increasing accidents (Auten 1988).

**High Speed Police Pursuits in Perth**

Controls on police operation of high speed pursuits in Western Australia occur at four levels: (a) Substantive law (Regulations of the Road Traffic Code, and case law); (b) Written instructions under the name of the Commissioner; (c) Training on vehicle pursuit and apprehension carried out by the Traffic Branch; and (d) Informal principles and rules which develop amongst officers in day to day practice.

**Substantive law.** Regulation 103(1) of the Road Traffic Code defines an 'emergency vehicle' as one "conveying a member of the police force on urgent official duty." In summary form, Regulation 204 provides exemptions in special circumstances for emergency vehicles, permitting them (on reducing speed and sounding a warning device) to proceed past a red or amber traffic light without stopping, to drive in any direction on any part of a road or overtake or pass on either side of another vehicle, to stop, stand or park the vehicle at any place at any time, and to exceed the posted speed limits.

Without these exemptions, it would not be possible for police to undertake urgent official duty. However, Regulation 204 clearly discloses that safety is the foremost priority. The phrase "where it is expedient and safe to do so" precedes the exemptions summarised above. What this actually means has been clarified by Court decisions. The thrust of these decisions is that although it is the duty of police to apprehend offenders, the primary consideration at all times is the safety of persons and property.

**Police guidelines.** Police instructions provide a framework for officers to carry out urgent duty and high speed pursuit operations. The following extracts from the *Police Gazette, October 19, 1988,* set out most of the relevant guidelines:

**OPERATION OF EMERGENCY VEHICLES**

It is not intended to prohibit high speed operations, particularly high speed
pursuits, but to provide for such to be conducted within guidelines designed to minimise danger to both the members of the police force and to the public and damage to public and private property. It is expected that members will continue to perform their lawful duty in the apprehension of offenders and in the protection of life and property with a response conditioned by the perceived threat presented by each event.

Priority Categories:

Responses to various tasks will be assigned to priority categories which will determine the level of response to an event as follows:

Category A: Authorises the use of flashing emergency lights and sirens while pursuing a vehicle or attending at a scene with the utmost urgency within the bounds of it being safe and expedient to do so.

This category is for pressing emergencies and is limited to those events where life is or may be threatened.

Category B: Authorises the use of flashing emergency lights and sirens while pursuing a vehicle or attending at a scene as expeditiously as is reasonable within the bounds of it being safe and expedient to do so.

Category C: Covers all routine tasks and does not authorise the use of flashing emergency lights and sirens nor unusual vehicle manoeuvres.

Security vans may be permitted to operate under Category B with the exception of High Speed Pursuits.

Flashing emergency lights and sirens must be operated at all times while vehicles are operating in either Category A or B. Vehicles not so equipped are not permitted to be operated in either of these categories.

Operations Management

The Headquarters Duty Officer and the NCO at Communications Branch are to be advised of all Category A and B events. The Headquarters Duty Officer is responsible for confirming the assignment of the particular category and monitoring the event.

Where traffic or other conditions indicate that associated hazards are inordinately high if the operation continues in that mode:

(i) the Headquarters Duty Officer;
(ii) the senior member in the vehicle; or
(iii) the member driving the vehicle,
may downgrade the operation. Where that decision is taken by other than the driver, the driver shall comply accordingly.

The member driving a vehicle remains at all times responsible for the safe operation of the vehicle and should determine the safest operating level regardless of being authorised to respond at a higher level category.

Vehicle Pursuits

"HIGH SPEED POLICE PURSUIT" - In these instructions a high speed vehicle pursuit means a pursuit where the driver fails to stop when called upon or where there is an inference that the driver would not stop when called upon when travelling at excessively high speed.
Where a high speed pursuit arises out of normal operations, the Communications Branch is to be advised immediately and the member responsible for the vehicle concerned will specify the category within which the vehicle is being operated. A second vehicle may be assigned to that category where an appropriate back-up seems required and that would normally be the next nearest available suitably equipped vehicle. All other responding vehicles will be assigned to Category B or C as circumstances dictate.

In traffic offence related pursuits unmarked police vehicles assigned to Category A or B will be replaced, where possible, with marked traffic vehicles, but this will occur only where the driver of the marked traffic vehicle has completed an appropriate pursuit course.

Similarly, motorcycles engaged in high speed pursuits will be replaced by a traffic pursuit sedan, where possible.

..........................

General

..........................

A vehicle conveying a prisoner or other non-police person is not to be used in an emergency vehicle situation unless the life of a person may be jeopardised should the vehicle not be used as an emergency vehicle.

Where a vehicle operating in either Category A or B is involved in a collision a commissioned officer is to attend at the scene ...

In addition, the use of roadblocks and forcible stopping techniques (overtaking etc.) is generally prohibited.

It can be seen that while addressing many of the issues raised in the literature, the current guidelines still leave the constable a good deal of discretion. There is no restriction, for example, on the offences which are permitted to give rise to a pursuit, and except in the case of an accident involving a police vehicle, there are no provisions for routine administrative review of every pursuit. As noted previously, the guidelines are therefore more toward the "judgemental" than "restrictive" end of the spectrum.

Training in the theory of pursuits. A half day course on pursuits is conducted periodically for traffic police by Traffic Branch. This course covers the legal aspects of pursuits, and provides much practical advice on the meaning of the priority categories, how to recognise dangerous situations, common errors in pursuits (such as over-excitement and failure to communicate information clearly over the radio), methods of stopping offenders' vehicles, positioning of police vehicles, and so on.

The seminar format provides for discussion amongst officers and for feedback on the features of good and bad pursuits. (In the session I attended, several tapes of pursuits were played, illustrating vividly how a pursuit can be called well or poorly, and also illustrating the potential for pursuits to get completely out of control if both drivers and Headquarters Duty Inspectors do not "keep their cool"). Since its introduction, the training program has been credited within Traffic Branch with contributing to a reduction in pursuit accidents.

Informal codes of practice. As part of the study, I conducted two focus discussion groups to elicit police attitudes and practices with respect to
high speed pursuits. One group consisted of traffic police, the other of officers from Division 79. In each case much animated discussion took place. Below is a listing of some of the themes which emerged in the discussions - expressed mainly in my own words. To preserve anonymity, no distinction is made between attitudes expressed by one group or the other.

* Officers conceded that in themselves traffic offences do not justify high speed pursuits, but stolen vehicles do (stealing a car is a serious offence). However, in every case it's who you might catch or what you might find that justifies pursuing. Every pursuit is a fishing expedition.

* Policing is not the answer to juvenile crime - the answer lies with the courts, which are far too lenient. Police feel that they are part of an "endless cycle" of arrest, nominal penalty, recommission of the crime, rearrest, etc. However, they have a duty to apprehend.

* Only one officer admitted that pursuits were good fun, although they accepted that other officers (especially new recruits) could have "cowboy" attitudes.

* Present policies on pursuits were regarded as OK, except that most felt that they should be given the power to forcibly stop offenders (present departmental policies were seen as an attempt to reduce the cost of repairs to police vehicles rather than as an attempt to prevent accidents). All felt that the distinction between Category A and Category B was too vague. They strongly defended the need for constables to have wide discretionary powers.

* There was a strong sense of individual accountability, and an awareness that if (for example) they went through a red light at high speed and killed another motorist, they could be convicted of a serious offence.

* Officers had a strong sense of self-preservation. The need to avoid having accidents was recognised, but self-preservation seemed to have priority. Nobody seemed to care what happened to the offenders.

* The rate of catching offenders is only 50% because police care about safety (safety is automatic).

* If pursuits were to be restricted or prohibited, there would be a big increase in the number of stolen vehicles and other offences (like evading RBT).

* Written guidelines which were more restrictive than the current regulations would be written by senior officers who are "out of touch with reality". In any case, an officer does not have time on the street to work through complex guidelines.
THE NUMBER OF HIGH SPEED PURSUIT

The total number of pursuits recorded and analysed for the period of the study (January 1, 1990 to June 30, 1990) was 346, an average of 1.91 per day. Although not all these pursuits were "high speed", the pragmatic approach was adopted of including all pursuits for which a Communications Branch pursuit form or High Speed Pursuit form was completed. Frequently both forms were completed, but in 130 cases (37.6%) only the Communications Branch form was available, and in a smaller number of cases only the High Speed Pursuit form was completed. Sample copies of these forms are included in Appendix A.

In addition, only forms held by Traffic Branch were included; a comparison with monthly statistics provided by VGI for 1989/90 suggest that in some months, copies of some Communications Branch forms were not sent to Traffic. It is also possible that counting rules used by Communications staff differ slightly from those used in this study. I have adopted the practice of counting as two pursuits those in which the pursuit of a vehicle was called off and then resumed some time later, and have also counted as two pursuits those cases in which two vehicles were chased by one or more police vehicles. These situations were relatively rare; the most common scenario involved a single offender vehicle being chased for a few minutes by one or more police vehicles before the pursuit was called off or terminated by an accident or by the offender being run to ground.

Apart from the discrepancies between the Communications and Traffic Branch statistics, there is one other indication that the records used in this study omit some pursuits. According to records in the Police Accident Section, there were 72 pursuits in the metropolitan area in the period of the study which resulted in an accident involving a police vehicle. Excluding nil damage cases, which were generally not counted as accidents for the purpose of this study (or were assigned a small nominal damage value), and adding one write-off of a traffic vehicle, which is not included in the damage statistics by the Police Accident Section, there were 62 pursuits resulting in a police accident during the study period. However, pursuit forms were received for only 49 of these accidents.

This appears to represent an under-reporting rate of about 20% for police accidents. It is possible that in these cases the officers involved completed the accident report forms and regarded the pursuit form as superfluous. However, one would expect that at least the Communications pursuit form would have been filled in.

Whatever the reason for the missing forms, all one can say with confidence is that at least 346 pursuits occurred in the study period, but that the true figure could be up to 20% higher than this, depending on whether the under-reporting rate for police accidents applies across the board for all pursuits.

Given the crucial importance of data on pursuits for management purposes, it is important that the records be as complete as possible. It is therefore recommended that:

The Commissioner direct that a High Speed Pursuit form must be
completed by all officers who call a pursuit, no matter how brief the chase and regardless of the outcome. The value of information on pursuits for management purposes should be emphasised, so that officers understand the reasons for completing a form.

The question arises as to whether, on a per capita basis, there are more police pursuits in Perth than in other parts of Australia. Comparisons are difficult, since records do not appear to be kept in most places. However, a study in South Australia by Murray (1987), based on data for a twelve month period from 9 April 1987 to 8 April 1988, found that 184 pursuits were officially registered. Assuming that most of these pursuits were in Adelaide, which is a city of about the same size as Perth, it seems that there are many more pursuits in Perth. Of course, as Murray points out, it is likely that some pursuits were not declared, through a failure to notify the Communications Centre. However, some officers in Perth suggested that the same phenomenon occurs locally, and in addition there is the evidence presented above that the present study is not based on a complete sample of pursuits.

A further reason why the comparison with South Australia may not be appropriate is that the data were collected two years ago. A more recent study has been conducted in Sydney by Donohue (1990). Although there appear to be no procedures in Sydney for recording details of all pursuits, in marked contrast to Perth, Donohue was able to obtain from Sydney Communications the total number of pursuits (as well as some information on accidents) for November 1989 to February 1990. She estimates that VKG in Sydney covers about half the metropolitan area, which would correspond to a population of about 1.75 million. There was an average of 75 pursuits recorded each month, leading to an estimate of about 900 per year.

Adjusting for the difference in population, it would appear therefore that there are about 36% more pursuits in Perth than in Sydney (514 per million of population in Sydney, compared with about 700 per million in Perth). If the comparison with the 1988 figure for South Australia is valid, the contrast between Perth and Adelaide is even more striking.

*It seems reasonable to conclude that police in Perth rely on high speed pursuits as an enforcement strategy more often than do police in Adelaide or Sydney.*

**Trends Over Time**

Although it is quite clear from discussions with many police officers that the number of pursuits has increased markedly in the last ten years or so, it is not possible to quantify this increase. For the past three years the Police Accident Section has kept statistics on the number of pursuits in which police were involved in accidents, and these figures suggest an increase of the order of 20% each year. However, it is not known whether this increase applies only to pursuits in which police vehicles were damaged, or to all pursuits.
Communications Branch has kept statistics on pursuits for each month of 1989/90 and 1988/89, but unfortunately accurate figures are not available for any earlier time period. Figures for the last two years are shown in the diagram on the previous page (this graph was kindly supplied by Communications Branch). It is quite clear that there has been a substantial increase in the number of pursuits over the past two years, although trends within each year are hard to discern.

The monthly figures derived from the records analysed in the present study are shown in the diagram below, and are contrasted with the Communications Branch figures for 1989/90.

The number of pursuits each month during 89/90

![Chart showing the number of pursuits each month during 1989/90]

The number of pursuits for the six months July to December 1989 was 329, while the figure for January to June 1990 was 358 (346 based on the records held by Traffic Branch). This suggests an upward trend, which is consistent with the known increase between 1988/89 and 1989/90, and also with a recorded increase in damage to police vehicles (discussed in a later section). The low figure for October 1989, and the high of 80 in March 1990, have no ready explanation.

It is also possible to examine trends on a more detailed basis by plotting figures for each day. These data are presented in the figure on the next page, for the study period. The "spike", representing 10 pursuits, occurred on Wednesday February 14, and was created largely by two stolen Commodores which were involved in four pursuits within a short period. Since the vehicles were chased as a pair, each pursuit was counted twice for statistical purposes, generating 8 pursuits. Other high days were mostly Fridays or Saturdays, with Sundays and Mondays generally recording the lowest scores.

Once again, it is difficult to discern a clear trend upward. There is a possible seasonal effect, with peaks in the middle of each month, although a longer series and more sophisticated analysis would be required to confirm this.
Despite the ambiguous evidence for an increase in pursuits during 1989/90, the comparison of data for 1989/90 and 1988/89 and the increase in the number of police pursuit accidents over the past three years both lead to the conclusion that year by year the number of pursuits has increased.

Media Publicity

During the course of this study, a number of people, both police and others, mentioned the possibility that media publicity may have an influence on the juveniles involved in motor vehicle theft. What they seemed to have in mind is that kids who steal cars and get into chases are treated as heroes by their mates, and that by sensationalising high speed pursuits the media feed this desire for notoriety. They were therefore hypothesising that publicity would lead to an increase in the number of pursuits, at least temporarily.

Number of high speed pursuits each day in Perth, January 1 - June 30, 1990

However, in-depth interviews conducted with a small sample of 10 offenders painted a different picture (these interviews are discussed in more detail in a later section). The offenders generally dismissed the media as an influence on their behaviour, but a few spontaneously mentioned the Tonkin Highway tragedy, in which three aboriginal young people were killed on April 5, 1990. (An innocent third party, a 49 year old man, also died some days later in hospital as a result of the crash.) The general tenor of the offenders’ comments was that the publicity about the disaster discouraged them from car theft, at least for a short period. A sample of the newspaper coverage is presented later in this section.

The offender’s comments are consistent with some tentative evidence from the United States. Alpert (1987) states:

Although the data are inconclusive, it appears that the number of pursuits may be affected by serious injuries and deaths which are reported in the media. In other
words, in the months following the most serious injuries and deaths, the number of pursuits was below the number reported in months after which no serious injuries or deaths were reported. (p. 302).

It seems clear from the monthly figures for May and June that there was no such effect in Perth, although once again a longer series of data would be required to confirm that May and June 1990 were no lower than the same months in previous years (adjusted for any upward trend in the data). However, it is possible that the Tonkin Highway tragedy had a short term effect which is not reflected in the monthly figures, and it is also possible that media publicity about pursuits generally had an influence on the rate of their occurrence.

These hypotheses can be tested by examining the daily pursuit figures, and correlating them with the intensity of newspaper coverage of police pursuits. All articles, letters and editorials appearing on this topic in the Daily News or in The West Australian for the period March 1990 to May 1990 were made available to me by Ms. Beverley Jowell, youthworker with Balga Presbyterian Church. I analysed coverage for each day during this three month period, assigning a score on a 5-point scale to each day’s coverage. Scores were based on the following criteria:

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
</tr>
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<tbody>
<tr>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>No mention of pursuits</td>
<td>Front page stories and headlines</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Minor mention in a small article or letter toward the back of the papers</td>
<td>Prominent feature articles</td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>News items of several columns, but not major articles</td>
<td></td>
</tr>
</tbody>
</table>

The article from the Daily News on the next page is an example of a scale score of 4 (maximum). It is assumed that the intensity of newspaper coverage reflects coverage in the electronic media, but unfortunately it has not been possible to analyse the content of these media.

The graphs overleaf show the number of pursuits and the newspaper publicity scores for each day for the period March 1 to May 31, 1990. (The graph for pursuits is just the middle section of the graph for the full six months which was shown earlier.) There is some support for the argument that the Tonkin Highway crash (April 5) had a temporary impact on the number of pursuits, since in the 7 days after the crash (April 6 - 12) there were only 8 pursuits, compared with 12 in the 7 days before the crash (March 30 - April 5). The average for a week over the full six months was 13.3.

However, fluctuations in this range are by no means unusual, as even a casual glance at the numbers of daily pursuits will confirm, and in any case, if there was any effect it was extremely short-lived, since in the second 7 days after the crash there were 17 pursuits. One should not therefore conclude too much from the dip in the curve.
Three teenagers were killed instantly when a stolen car crashed during a high-speed chase early today.

The car sped through a red light at more than 110kmh and slammed into the side of a Range Rover.

Just seconds earlier police had backed off from the chase because the speed had made it too dangerous.

Sixteen-year-old John Adams, 14-year-old Peter Martin and 13-year-old Robert Clarke were killed in the crash.

The driver and two of his passengers, a boy and a girl, were injured.

One was in the front seat and the other in the back.

Firemen had to use cutting equipment to free the bodies from the mangled wreck.

The other three passengers, a 13-year-old boy and 11-year-old girl, were all injured.

The driver of the Range Rover was knocked unconscious in the collision.

All four were taken to Royal Perth Hospital, where they were in satisfactory conditions today.

Senior police have been predicting for some time that a tragedy would happen during a high-speed chase.

They are set to meet at Police Headquarters today to discuss calling talks with all parties responsible for controlling juvenile crime.

The accident happened at the intersection of Tonkin Highway and Welsby Pool Road four minutes after the chase started.

The stolen Commodore was travelling north on Tonkin Highway at more than 110kmh and had sped around a bend just before the intersection.

Police were 300m behind and out of view when the accident happened.

A police spokesman said the police driver, from the instant response Unit Division, had decided to "back off" because the speed was too high.

"They were going to try and pick up the speed of the chase in a car that could handle such a chase."

Early reports indicated the 7 Division officers had tried to stop the Commodore at 3.4kmh, even before it had been reported stolen but it sped off.

They reported the accident to radio operators at 3.23am.

Police hope one of the injured children will be able to identify all those in the car who could possibly have killed their families.

Details will be released later.

Amature Commission for Traffic Len Thrombey and police at the scene are sure a tragedy had to happen.

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Long list of close calls

UP UNTIL the death of three children this morning a total of 23 people have been killed in a high-speed police chase, despite a long list of close calls.

On Wednesday last week a motorcyclist was killed when a stolen car crashed during a high-speed chase.

During the chase the on-duty officers were struck by a stolen car.

In December a 27-year-old woman was seriously injured in a collision with a stolen car while being chased by police in Cowaramup.

There were four juveniles in the stolen car. The injured man and his chance of at least 150kmh were going to be killed in another vehicle.

On November 17 two pedestrians were hit during a high-speed chase through Lockridge.

The 35-year-old man and the woman, 28, were struck down as another car smashed into the eastbound lanes.

On May 4 a man was killed when a stolen car collided with another car and ploughed through a river. The man was killed during a high-speed chase.

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Number of high speed pursuits in Perth each day, March 1 - May 30, 1990

Intensity of newspaper publicity concerning pursuits, March 1 - May 30
The more general question of whether the intensity of newspaper publicity influenced the incidence of pursuits was investigated by correlating the intensity scores with the numbers of pursuits, allowing lags of one and two days (since publicity on Day 1 could be expected to influence the number of pursuits on Days 2 or 3). These correlations revealed absolutely no relationship, with coefficients of the order of .03 (negligible).

*Thus it seems that media coverage has little or no effect on the likelihood of pursuits occurring.* Neither the "hero" hypothesis nor the argument that serious accidents have a sobering effect on offenders (or police?) is supported.

**DESCRIPTIVE ANALYSIS OF PURSUITS**

Details of the 346 pursuits recorded for the period of the study were entered into a relational multi-table data base using the facilities of the Research and Statistics Section and the National Centre. The complete data base is held in the Research and Statistics Section, and is available to the Department for further analyses. The structure of the data base is summarised in Appendix B. It consisted of five related components: general details of the pursuit, details of police assisting, the severity of any injuries sustained by police, offenders, or third parties, details of offenders, and the charges preferred.

The pursuit forms (Appendix A) were the major source for the data base, but in addition information on the age and sex of the police driver was obtained from personnel records (using the PC number of the driver), the amount of damage to police vehicles was obtained from Police Accident Records, and details of the offenders' vehicles (make, horsepower etc.) were obtained from the Motor Vehicle Licensing data base (using the vehicle licence number).

In this section the basic features of pursuits are described, based on a subset of the information contained in the data base. More detailed analyses of factors predictive of accidents and of the offenders involved in pursuits are presented in later sections.

**Pursuit Context**

**Road, traffic and weather.** As can be seen from the graphs on the next two pages, most pursuits took place on bitumen roads with good surfaces, in light traffic and in fine weather (it will be recalled that most of the winter period was not included in the study). Nearly four pursuits out of five (79.5%) took place at night (between 8 p.m. and 5 a.m.). As noted earlier, the most popular days were Saturday, Friday and Wednesday.

Frequently police reported aborting a pursuit when the offender drove onto gravel or off the road into the bush. It should perhaps be noted that although traffic conditions were usually light or very light (taking place at night), 34 pursuits did take place in medium or heavy traffic conditions.
**Duration.** Most pursuits were of short duration. In fact, the median time was three minutes, 55.8% of pursuits being completed in this time. However, the distribution is of a classic skewed shape, with a long tail, with 2.0% of chases taking longer than 30 minutes. The longest pursuit was just over an hour (62 minutes). These figures are comparable with South Australian and U.S. research. In South Australia, 76.1% of pursuits took 5 minutes or less, while the figure for California was 67.8% (Murray, 1987).

The brief duration of most pursuits raises questions about the feasibility of forcible stopping devices such as “tyre fangs” (which, it is argued, deflate the offender’s vehicle’s tyres without causing an accident). McGrath (1988), in a study of pursuits in Adelaide, also concluded that these types of devices could probably be deployed in only a small percentage of pursuits.

**The Police**

**The number of police vehicles.** When a pursuit is called, the Duty Inspector in Communications makes a record of all police vehicles involved. Each vehicle is assigned a category: A, B or C. It can be seen from the figure on the next page that in 151 cases (43.6%) only one vehicle was recorded as being in pursuit, with the maximum recorded being 11. However, in some pursuits only the High Speed pursuit form was available, and in these cases it is likely that other police vehicles were involved in some capacity but were not recorded by the driver of the primary pursuit vehicle. Consequently, the number of times a single vehicle was involved was probably significantly less than the recorded figure of 151. In addition, a number of officers commented to me that on at least some occasions the number of police vehicles involved exceeds the number who actually call in on the radio.

In nearly one quarter of pursuits (22.3%) three or more vehicles were recorded as being involved, and in 2.3% of cases there were 7 or more. These figures, together with my own observations of pursuits (from two sessions in Communications Branch) and comments of many officers suggest that “the caravan effect” may occur in a significant number of cases (Murray, 1987). Although Murray and other experts in the area concede that there are situations where several vehicles may be required (in the case of a violent offender, for example, or where there is a need to block off intersections to prevent accidents to innocent road users), all authors are unanimous that the general rule should be one primary pursuit vehicle and one back-up. There is, admittedly, debate in the literature as to the role of support vehicles (Shuman & Kennedy, 1989).

Even allowing for the fact that in many cases one vehicle may take over from another (for example, a marked traffic vehicle may take over from a general duties van), at least one pursuit in ten seems to involve an excessive number of vehicles. Current guidelines, such as the Police Gazzette of October 19, 1988, refer to one back-up vehicle which may be assigned to the same category as the primary pursuit vehicle, but also refers to “all other responding vehicles” which may be assigned to Category B or C “as circumstances dictate.”
It is recommended that:

Through modifications to the guidelines, through training, or through other means deemed appropriate (such as an automatic vehicle location system), senior management take steps to eliminate “caravanning.” In particular, the proper role of support vehicles (vehicles other than the primary pursuit car and the backup) should be clarified.

Pursuit categories. In 320 cases (92.5%) the primary pursuit vehicle was assigned Category B. Excluding the 14 cases when the pursuit category was not recorded, the proportion of Category B pursuits rises to 96.4%. Only 1.2% and 2.4% were assigned Categories A and C respectively. However, examination of the categories assigned to all the vehicles assisting reveals that of the total of 479 recorded, 379 (79.1%) were assigned Category C (only one was assigned Category A). Thus most support vehicles were not authorised to pursue at high speeds.

The use of Category B rather than Category A in nearly all cases suggests that high speed pursuits rarely involve “events where life is or may be threatened.” As the U.S. literature makes clear (e.g., Beckman, 1983; Fyfe, 1990), the real reasons for chasing an offender in practice is that he “takes off” when called upon to stop, regardless of the offences he has been observed to commit. This is interpreted both as an unexpected slap in the face (the police officer’s pride is hurt) and also as an indication that the offender has something sinister to hide.

This last point became quite clear in focus group discussions with officers - the possibility of uncovering a serious crime (such as dealing in large quantities of heroin) justified pursuing every time a driver failed to comply with the direction to stop. This practice, which seems universally accepted amongst police I spoke to, raises fundamental questions of ethics and police work which will be discussed further in a later section.

Reason for initiating the pursuit. By reading carefully the description of events as set out in the High Speed pursuit form (where it was available), it was possible to infer in some cases the reason for the initiation of the pursuit. The figure on the previous page shows that in 177 cases (51.2%) nothing at all could be inferred with any reliability. In many cases the narrative began by saying, in effect, that we followed a car (or did a U-turn and then followed a car) which then accelerated away at high speed. Presumably something about the vehicle, the occupants, or the manner of driving aroused the suspicion of police, but the nature of this suspicion is not communicated.

It is clearly critical for the management of pursuits that senior officers have a reliable record of the initial reasons for pursuits. It is recommended that:

The High Speed pursuit form be amended to require information about the reason for the pursuit in explicit form. If “suspicion” is the reason for initially tailing a motorist, the nature of the suspicious circumstances should be spelled out.

Referring back to the diagram, it can be seen that in cases where the reason for the pursuit could be inferred, traffic offences (speeding, erratic driving,
equipment faults, failure to stop at traffic lights etc.) were the most common precipitators (50.9%). The prominence of traffic offences is consistent with other studies in Australia and the United States (e.g., Fennessy et al., 1970; Murray, 1987), although the proportion of traffic offences does seem somewhat lower in Perth, and the proportion of “stolen vehicle observed” cases rather higher (22.5%). In addition, 13 of the 18 cases in which the vehicle was known to have been used in a crime or a crime in progress was observed (“crime event”) involved a stolen vehicle.

**Police precipitation of pursuits.** Although it is obviously impossible to infer too much from brief descriptions of events, I suspect that in at least some pursuits police action may have contributed to the offender’s decision to flee. This is especially the case when U-turns are mentioned. One has the impression of quite precipitous turns of events - sudden stops, quick U-turns, and determined efforts to draw near the motorist - which, depending on how they are executed, may have the effect of alarming the offender and causing him to panic.

Of course, if the offender is driving a stolen vehicle he may take off as soon as he sees the police, no matter how the police drive, but I was struck by the fact that several offenders I interviewed mentioned panicking when the police drew near. Their panic was exacerbated in some cases by drug impairment (often with “speed” or Serepax), and one wonders whether a more unobtrusive approach by police, if it could be managed, would contribute to a reduction in the number of pursuits. As O’Keefe (1989) comments:

> Every effort [in training sessions] should be made to determine the procedural or tactical errors that can potentially result in a high-speed pursuit. Abruptly turning around on a speeding vehicle or turning on the emergency lights too early are but two examples of the types of errors that can provoke a pursuit. (p. 20).

It is recommended that:

> Techniques for tailing motorists which minimise the chances that police action will precipitate a pursuit be given explicit attention in the pursuit training sessions.

**Provocation by offenders.** It is frequently alleged in the press that offenders provoke pursuits by taunting police (see, for example, The West Australian of April 11, 1990). A check of the records suggested that in only about six cases in the study period there was evidence of such baiting at the commencement of a pursuit, although clearly in some cases during a pursuit the offender acted in a deliberately provocative way (by, for example, slowing down and then taking off again).

In a couple of cases offenders drove stolen vehicles past a police station, making rude signs, and in 3 or 4 cases a motorist tried to ride down police officers (usually when they were engaged in RBT operations). Of course there may have been other cases of provocation which were not described, but the analysis does suggest that deliberate provocation at the commencement of a pursuit occurs in only a very small percentage of cases.

To the extent that deliberate provocation occurs (as in the cases of the stolen vehicles), it is in my view doubtful that police should rise to the bait.
Clearly the offenders are looking for a pursuit, and common sense suggests that the circumstances are likely to lead to an accident. This seems to be an area where, despite the apparently low frequency of the events, police (especially young officers) should be trained to “keep their cool” and investigate alternative means of apprehending the offenders (surely possible if the offenders make their identities obvious by their actions or if they hang around waiting for police to swing into action). It is recommended that:

*Training sessions examine the problem of offender provocation, and a range of alternatives to a high speed pursuit be developed for apprehending the offenders.*

**Types of police vehicles.** A figure showing the types of police vehicles used as *primary pursuit vehicles* is presented on the next page. General duties (Sierra vans) were involved most often (39.6%), followed by traffic (38.2%) and then Division 79 (11.3%). If support vehicles are analysed, general duties become slightly more prominent (46.9%), with traffic comprising 33.5% and Division 79 9.4%. These figures reflect a situation which is well known within the Department: general duties vans do high speed pursuits even though they are not designed for the purpose and many of their drivers are not pursuit trained (11.4% of general duties drivers were pursuit trained, compared with 86.1% of traffic drivers, 54.1% of Division 79 drivers, and 64.7% of the remainder).

Of course, the involvement of different police sections must be judged relative to the number of vehicles in each section. In the focus discussion with Division 79 men, they emphasised that they have only 7 vehicles for 50 men, and that given this limitation they are more involved in high speed pursuits than any other part of the service. While it would be interesting to analyse further the involvement of traffic, general duties and Division 79, I have come to the conclusion that the rate of non-recording of pursuits is directly correlated with the section carrying out the pursuit. Evidence presented in a later section on police accidents demonstrates that in such cases Division 79 had the highest rate of non-use of the High Speed pursuit form and Traffic the lowest, and it seems quite likely that these rates of non-response would apply to non-accident cases as well.

In addition, despite the designation of one vehicle as the primary pursuit vehicle in most cases on the Communications pursuit form and the High Speed pursuit form, descriptions of many pursuits suggest that in some cases two vehicles (perhaps Division 79 and Traffic) acted “in tandem”. For all these reasons, it seems appropriate to treat the statistics on the type of police vehicles involved as at best approximate. A final consideration is that since the move to three shifts by Traffic Branch, traffic vehicles have probably become more prominent in pursuits, making the figures for the first half year out of date.
Characteristics of police. An aim of the study was to record the rank of the police driver, and also to analyse the characteristics of the passenger (age, sex, rank). However, this information was not recorded on the High Speed pursuit form and had to be obtained by matching PC or SGT numbers with personnel records. Unfortunately it was not possible to retrieve this information during the period of the study, with the exception of the age and sex of the police driver.

The average (median) age of police drivers (where known) was 27. The youngest was 19, and the oldest 44. Only three were female. Slightly over half (51.7%) of drivers were pursuit trained (excluding cases where this information was not recorded). As noted earlier, this partly reflects the number of general duties police who engage in pursuits.

Maximum speeds. The maximum speeds attained by offenders and/or police in pursuits were recorded in 79.8% of cases (276). The graph on the previous page shows that the distribution of speeds was roughly symmetric about 140 km/h as modal category. The median was 130 km/h. A small number of pursuits involved quite low speeds (60 or 70 km/h), but 21.0% recorded speeds of 160 km/h or more.

These speeds seem high in comparison with other studies. The median was about 115 km/h in Murray's (1987) of pursuits in South Australia, and was about 112 km/h in a Michigan study cited by Murray. Similarly, the proportions of pursuits in which speeds over 160 km/h were obtained were 9% and 7% respectively in the South Australian and Michigan studies - less than half the proportion in Perth.

As Murray (1987) emphasises, it is very difficult to specify the speeds police will be allowed to reach in pursuits - it is "a matter of extreme controversy." (p. 46). One danger in setting an arbitrary upper limit is that the figure will become known to offenders, and another problem is that a single figure takes no account of road and traffic conditions. In the South Australian study 41.8% of pursuits were between midnight and 4 a.m., compared with 45.8% in Perth, and it is probable that road and traffic conditions were not dissimilar to Perth.

It seems that maximum speeds attained in Perth are high in comparison with other jurisdictions. This should be a cause for concern, although analyses of accidents in a later section suggest that maximum speed is not a good predictor of an accident outcome (although it does predict the amount of damage when a police accident occurs).
Pursuit Outcomes

A pursuit can end in a number of ways: it can be aborted, by the driver or by the Headquarters Duty Officer, it can end with the apprehension of the offender without incident, the offender may get away in his vehicle or on foot, or it may end with damage to one or more vehicles or to other property. Damage may be the result of an accident or the result of deliberate sabotage by the offender, or both, and the offender may or may not be caught after such incidents. The distribution of these outcomes for the present study is shown in the figure on the next page. (This figure does not include two pursuits for which the outcome was not known.)

Apprehension of offenders. In 69 cases (19.9%) one or more offenders were apprehended without an accident occurring. The overall rate of apprehension was 50.6%, which is much lower than in South Australia (84%) and in California (77%) and Florida (63%) (Alpert, 1987; Fyfe, 1990). In Perth, offenders are frequently apprehended in a foot chase after the vehicle is abandoned (most of the 85 cases under “other” in the “Offender apprehended” graph are of this type).

It is not clear why the apprehension rate in Perth is so much lower than in other jurisdictions, especially since accident rates are as high as in the U.S. and higher than in South Australia or Sydney (accidents are analysed later in this section). Voluntary terminations, discussed below, may be one reason why U.S. police have more success.

Terminations. The low apprehension rate is also not explained by a high rate of terminations by police in Perth. In only 7 cases, or 2.0%, did the pursuit end by being terminated by the police driver (or passenger). Headquarters terminated the pursuit in a further 6.4% (22) of cases, although it is important to note that a directive to abort was issued in some cases just before an accident occurred or the offenders abandoned their vehicle and were pursued on foot. In these cases, the pursuit outcome would probably have been classified as something other than a termination.

Even allowing that the number of pursuits in which an order to abort is slightly understated, the rate of termination is not much higher than the 4% in California or the 7% in Florida (Fyfe, 1990). The figure for Sydney reported by Donohue (1990) is 10.7%, higher than the 8.4% figure for Perth.

It is striking how rarely the police driver aborted the pursuit, despite the high percentage of pursuits which resulted in a crash and despite the fact that in 1 case in 10 the driver reported that other motorists had to take evasive action (these data are presented in detail later in this section). The percentage of 2% terminations by the driver underlines the truth of remarks made by many scholars and practitioners who have studied the problem. For example, Auten (1985) states:

The police driver tends to develop “tunnel vision” in that the apprehension of the violator becomes the primary concern, usually at the expense of safety considerations. Emotions heighten, adrenalin “dump” occurs, the focus of vision narrows, common sense goes out the window, and basic safe driving practices are ignored. An “I will catch that bastard if I have to chase him all the way to the other end of the state,” attitude emerges. (p. 16).
In this situation, there is a clear need for the constable’s “inviolable discretion to uphold the law” (Murray, 1987) to be moderated by written guidelines and by supervisory practices which place greater weight on the protection of life and property than appears to be the case at the moment. It is also imperative that the individual officer who takes the decision to pursue is held accountable for his or her actions, whether or not an accident occurs.

It is not clear to me how many officers understand that in Western Australia the Commissioner is not vicariously liable for accidents occurring in the course of high speed pursuits (as he may be in some other states, such as NSW [NSW Police Service, n.d.]). However, individual accountability cannot be made a reality (except in the rare case of a serious accident followed by a formal enquiry) unless there is some mechanism for reviewing pursuits on a routine basis, and providing feedback to officers. This feedback should be positive and constructive, so that the review process is a learning experience (O’Keefe, 1989).

Before leaving the question of termination, it is worth noting that in some U.S. studies as many as 36% of pursuits are voluntarily terminated by the motorist (Fyfe, 1990). This outcome appeared to be so rare in Perth that no category was created to record its incidence. However, the percentage was certainly very tiny (less than 2%). Perhaps as noted previously the low rate at which offenders “give up” helps to explain the low apprehension rate.

**Accidents.** Clearly an accident was the most common single outcome, occurring in 91, or 26.3% of cases. Accidents included all situations in which some damage, sometimes minor, was caused to one or more vehicles or to other property as a result of the pursuit, but excluded situations in which damage was inflicted as the result of deliberate actions on the part of the offenders. Deliberate damage was caused in 27, or 7.8%, of cases, but in just over half these incidents an accident occurred as well, often a little later. For example, the offenders might have slowed down and waited for police to draw near, and then reversed into them at high speed before taking off again and then overturning on a corner a few kilometres down the road.

Thus the overall crash rate was 34.1% (118 cases). This is comparable with U.S. studies (Alpert, 1987; Fyfe, 1990), although higher than in South Australia, where the crash rate was 43 out of 184 pursuits or 23.4% (Murray, 1987), and much higher than Donohue’s (1990) estimate for Sydney (17%, or 1 in 6).

In one third of cases (33.2%) the offender’s vehicle was recorded as damaged. There would perhaps be some poetic justice in this if the vehicles damaged belonged to the offenders, but in most cases the damaged vehicles were stolen.

**Damage levels.** The overall incidence of damage, no matter how caused, was 34.1% (118 cases). Although it is impossible from the information provided on the forms to arrive at any exact estimate of the amount of damage, I attempted a rough form of quantification based on the descriptions of overall damage on the High Speed pursuit forms. (When police vehicles are damaged exact costs are available for the police vehicles only. These figures
are analysed in a later section.) I used a 5-point scale to assess overall damage:

<table>
<thead>
<tr>
<th>Minor</th>
<th>1</th>
<th>Punctured tyres/bogged in mud/damage to wheel etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>Hit trees or fence/offender fell off bike etc.</td>
</tr>
<tr>
<td>Medium</td>
<td>3</td>
<td>Some injury/pole sheered off at base/major impact with tree etc.</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Collision with another vehicle/ramming/serious injuries etc.</td>
</tr>
<tr>
<td>Major</td>
<td>5</td>
<td>Deaths/major crash involving several vehicles etc.</td>
</tr>
</tbody>
</table>

Despite including most cases of minor damage, I did decide to exclude cases where the damage appeared to be so trivial as to involve little or no cost. For example, most cases in which Police Accident Records assigned a nil damage bill were not counted as accidents. In a small number of these cases a nominal repair bill was estimated and a scale score of 1 assigned.

The use of this scale obviously involved a fair degree of subjectivity. However, in cases where police vehicles were damaged it was possible to correlate the scale score with the actual costs of repair. The result was a correlation coefficient of .47 (based on 47 incidents), which suggests that the scale is meaningful (a correlation of 1 would indicate perfect correspondence between police damage and the scale score, while a correlation of zero would indicate no association at all.) The correlation provides an imperfect measure of reliability, since the scale score included damage to all property, not just police vehicles, but since in most cases the level of damage to police seemed to mirror the amount of damage to other property, the test should have reasonable validity.

The distribution of damage levels is shown in the diagram under that showing the pursuit outcomes. Of 111 cases in which damage level could be assessed, 20 (18.0%) involved damage of minimum severity, while only 4 (3.6%) were judged to involve the most serious outcome (the Tonkin Highway deaths were of course assigned to this category). However, most damage was at the medium to serious end of the range.

**Injuries and deaths.** One or more injuries were recorded in 23 pursuits, or 6.6% of cases. This is higher than both the South Australian study (4.3%) and the Sydney study (4.2%) conducted by Donohue (1990), but not as high as the level of 14% recorded in the Michigan and Californian studies (Murray, 1987) or in another U.S. study by Alpert (1987).

When injuries occurred, the mean number of people injured was 1.4. In 18 cases one person was injured, in 2 cases 2 people were injured, and in one case 7 were injured.

One police officer was injured in 2 pursuits, and 3 pursuits involved injuries to 2 officers. Thus 8 police were injured during the period of the study, compared with 21 offenders and 3 other persons. The injury rate of police seems considerably lower than that of offenders. As Fyfe (1990) comments:

When pursuits begin, they involve two parties. The first party is usually a well-trained, well-rested, and physically fit police officer strapped into a heavy duty and/or high performance police vehicle. Thus, such officers rightly assume, if anybody can drive safely on public roads at high speed, it is they. ... however, the second party is often a young man whose recklessness and irrational courage have been inflated by liquor, drugs, or fear of being caught in Dad's car without permission. ... At this point, well-trained and well-equipped police officers who
know what is going on are probably in less danger than anybody else on the roads on which pursuits occur. (p. 121).

Where the severity of injuries could be assessed, medical attention or hospitalisation was required in all but 3 cases. One pursuit (the Tonkin Highway crash) resulted in the death of 4 people: 3 offenders and 1 third party.

No police officer has yet been killed in a pursuit in WA, although given the record of other states (SA, NSW), if pursuits continue in Perth at their present rate the death of a police officer sooner or later seems inevitable, despite the factors noted by Fyfe (1990) which place police at lower risk than offenders.

**Damage to Police Vehicles in Pursuits**

In the pursuit data base constructed for the present study, 52 accidents in which police vehicles were damaged were recorded. As noted previously, this excludes a number of cases of “nil damage”. Thus in 15.0% of all pursuits, some appreciable damage to police vehicles was recorded. Although there is very little information available from the High Speed pursuit forms on the amount of damage to offenders’ vehicles or to other property, in the case of police accidents it is possible to obtain reasonably precise estimates of damage.

As indicated in their annual reports, the Police Accident Section is charged with the responsibility of conducting impartial and thorough investigations into all motor vehicle accidents involving departmental vehicles, and vehicles driven by police officers, whether on or off duty. The Section records details of all accidents involving police vehicles, and separates figures for pursuits from accidents occurring in other contexts.

In the 89/90 financial year, there was a total of 126 pursuits involving traffic accidents in which a police vehicle was involved. The comparable figure for 88/89 was 107, and for 87/88 it was 87. (Prior to 87/88, there was no requirement to keep separate figures on pursuits.) These figures are shown graphically below. Also shown is the involvement of civilians, offenders, and objects in pursuits in which a police vehicle was involved in an accident.

It appears that police involvement in pursuit accidents is growing by about 20% per annum, which may simply reflect the growing number of pursuits, or it may reflect a growing accident risk to police in pursuits. An analysis of police pursuit accidents for the first six months of 1990 (the period of the study) tends to support the latter hypothesis. The raw data for the analysis of police accident damage, as obtained from Police Accident Records, are presented overleaf. These include all pursuits which took place during the study period which involved damage to a police vehicle (excluding nil damage cases).
Pursuits involving a police accident

When using the accident information for research purposes, it is necessary to take into account the practices of the Police Accident Section. First, vehicles written off are not included in the records. There was one instance of this between January 1 and June 30, 1990 (a Traffic Branch vehicle). Second, vehicles which are damaged may be “sold as is not repaired” (SAINR). Usually no estimate of the repair costs is included in these cases.

Third, the Police Accident Section is required to provide evidence of a civil debt capable of being proved on the balance of probabilities, in a Local Court, where such action is deemed necessary. In this way some of the costs to the Department of police accidents may be recovered. However, it is not known how much is actually recovered in this way, and in any case, for the purposes of this study it will be sufficient to take the damage bill as recorded as an index of crash seriousness.

Finally, repair costs are for accident reports received for the period June 1 of the previous fiscal year to May 31 of the current fiscal year, to overcome problems of delay in establishing the amount of damage. Thus adjustments are necessary for the purposes of the present study, which is based on accidents occurring (not accident reports received) for the first six months of 1990.

According to the 1989/90 Annual Report of the Section, the raised repair costs for departmental vehicles involved in traffic accidents during pursuits was $89,734. In order to adjust for the one month delay in the figures in the report, the figure of $4639 for June 1989 should be subtracted, and the figure of $8228 for June 1990 should be added in (it is interesting to note the contrast between the figures for these two months!). When this is done, we obtain a figure of $93,323 for the 1989/90 fiscal year.
### PURSUITS IN WHICH A POLICE VEHICLE WAS DAMAGED

**Jan. 1 - June 30, 1990**

*(excludes nil damage cases)*

**Metropolitan** (date order)

<table>
<thead>
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<th>Police accident file number</th>
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**METRO TOTAL (excl. SAINR)** 53135  
*(62 pursuits)*

**Country (date order)**

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**COUNTRY TOTAL (excl. SAINR)** 8882  
*(12 pursuits)*

**GRAND TOTAL (excl. SAINR)** 62017  
*(74 pursuits)*

**Note:**
(a) There were 11 nil damage pursuits for the period.
(b) SAINR means "sold as is, not repaired". These accidents are not recorded as incurring any damage bill to the Department.
(c) One traffic vehicle was written off (10/3/90). This is not included in the damage bill.
This figure can be compared, more or less, with the sum of $62,017 for the state from the table on the previous page. The reason why the comparison is approximate is that the Police Accident Section figures are based on the date a file is received, while the table on the previous page is based on the date on which the pursuits occurred. However, even allowing for some error due to this factor, it seems clear that damage to police vehicles in pursuits was approximately twice as great in the first six months of 1990 as in the second six months of 1989.

The hypothesis that pursuits are getting more dangerous to the police (or at least to their vehicles!) would seem to be supported, given the evidence presented previously that during 1989/90 the overall number of pursuits increased only slowly.

It would seem very important that the existence of these kinds of trends be communicated to senior management on a regular basis, so that the causes of any cost blow-outs can be investigated. Police Accident Records Section maintains an accurate record of repair costs, but does not have the computing facilities to provide analyses on a regular basis. It is recommended that:

Police Accident Records be provided as soon as possible with a micro computer so that a computerised data base of police accident data can be established. The Section should be required to provide detailed and regular reports on trends in accident costs (at least monthly), so that remedial action can be taken to prevent accidents before the costs are incurred.

Computerisation of the records would have the added advantage of providing quick and regular feedback on all forms of police accidents, not just those occurring in pursuits, and would facilitate the process of identifying police drivers who are involved in a disproportionate number of accidents. Equally important, computerisation would facilitate the identification of drivers or sections with exemplary driving records.

**Police road safety indicators.** Donohue (1990) makes some useful recommendations concerning police driving practices in NSW. One recommendation is that police road safety indicators should be introduced and deployed at the Patrol and organisational levels. Translating this into WA terms, Police Accident Records could, if their records were computerised, construct such indicators, over time, for different branches of the Department (Division 79, Traffic etc.) as well as for different police stations. Donohue further recommends that Patrol Commanders should have a Police Road safety target in their performance measures. These should be interpreted in a positive sense: each station or section could strive for the best safety record, and rewards should be awarded for good performance. Moreover, as police appraisal systems are developed in this state, assessment for road safety should be included. It is recommended that:

*The Department study Donohue's (1990) recommendations concerning road safety indicators, targets, and education within the Police Service, and develop road safety policies suitable to the situation in Western Australia.*

Some of the developmental work could appropriately be done by the Occupational Health, Safety and Welfare Unit. According to the annual report
(Western Australia Police Department, 1990), the objectives of this Unit include:

To ensure that effective action is taken to avoid, remove or remedy, the causes of accidents in all police work places.

To provide safety training instruction and information to all employees. (p. 39)

Given the central role of motor vehicles in police work, it is interesting to note that the annual report does not give explicit attention to the motor vehicle as a potentially dangerous piece of equipment requiring special attention and evaluation. Of course, the Unit in WA is by no means alone in this oversight (Donohue, 1990). It is also likely that the driving training provided by the Academy and the Advanced Driver training course is deemed to meet the obligations of the Department in this regard. However, responsibility for road safety goes well beyond the provision of this kind of training.

**Non-reporting of pursuits.** Records of police accidents are reliable (except, as has been suggested to me, when officers might arrange repairs privately overnight!). It is therefore important to note that for 13 pursuits involving accidents there was no record of the pursuit in the High Speed pursuits file (the data base for the present study). In addition, there was no Communications Branch form held by Traffic Branch for these cases, suggesting that copies of these forms had gone astray.

Of the 13 missing pursuit forms, 2 involved Traffic Branch officers, 5 involved CIB (mostly Division 79), and 6 involved General Duties. It would appear therefore that CIB and General Duties officers are less likely to fill out pursuit forms when there is a police accident. The mean damage levels for the accidents in which pursuit forms were not completed were $486 (Traffic), $813 (CIB), and $670 (General Duties). Whether these non-response rates apply in accident cases is not known. This problem reinforces the need to ensure that pursuit forms are completed for all pursuits.

**Use of police damage data for the analysis.** Pursuits contribute about 28% of the total costs of damages to Departmental vehicles (Police Accident Section Annual Report, 1989/90). In order to carry the analysis of damage to police vehicles further, I have quantified the damage in each case, and included the dollar cost as a variable in the data base. In order to do this, it was necessary to assign an arbitrary value of $1500 to the SAINR cases (probably a bit conservative), and a value of $16,000 for the vehicle written off (based on the market value of a two year old Commodore).

This yields an estimate of $78,135 damage for 63 metropolitan pursuits in the six months (62 plus the pursuit in which the Traffic Branch vehicle was written off). Thus the average damage was $1240 for each pursuit in which a police vehicle was damaged (excluding nil damage cases), and $226 for each pursuit overall, assuming 346 pursuits for the six months.

*Putting this last figure in a more dramatic way, every time the buzzer goes off in Communications Branch, announcing a pursuit, it costs the community an average of $226 in direct damage to police vehicles.*
The total costs to the community are, of course, many times this figure, given that offenders' vehicles are damaged in one third of all pursuits, and that these are frequently expensive new stolen vehicles. If the costs to the community of the hospitalisations and deaths are added, the average cost to the community of each pursuit is almost certainly well over $1,000.

**THE OFFENDERS**

Information on offenders is available from three sources:

(a) The Communications Branch pursuit form and the High Speed pursuit form;
(b) The police computer (criminal histories);
(c) In-depth interviews with a sample of 10 juvenile offenders involved in pursuits during the study period.

This section is based mainly on (a). (A later report will contain a detailed analysis of the interview and criminal records data).

Descriptions of the offenders, their behaviours, and the charges preferred are set out in the diagrams on the next two pages. These diagrams are based on the pursuits data base.

A total of 272 offenders were apprehended at the time of the pursuit. (Offenders suspected, or apprehended at a later time, have not been included in the analysis at this point.) Of these, 153 (56.3%) were drivers. These 272 offenders generated 754 charges, an average of 2.77 per offender.

**Age and sex.** It is commonly believed that most offenders involved in pursuits are aboriginal juveniles. However, based on apprehended drivers, this picture is not entirely correct. It can be seen from the diagrams on the next page that while many offenders are juveniles, a substantial number are 18 or older. (Recall that the age distribution shown is for drivers.) In 202 pursuits (58.4%) the age of the driver was not known. Of the 144 cases where this information was available, 61, or 42.4%, were 17 or younger. Two thirds (67.4%) were under 21. The median age was 20.

The pursuit driver seems to about three years older on average than apprehended motor vehicle thieves, for whom the median age was 17 in 89/90. However, the median age of all offenders apprehended in pursuits (drivers and passengers) was 17, the same as for the total population of motor vehicle thieves.

There were one or more females present in 15 pursuits (4.3%). Of all offenders apprehended, 22 (8.1%) were females. In nearly all cases the driver was a male. The figure of 8.1% is comparable with the 9.6% female representation in the 89/90 statistics for motor vehicle theft.
Race. Aborigines were present in 68 out of 178 pursuits in which an offender was caught (38.2%). Of the 272 offenders apprehended, 104 (38.2%) were aborigines. There was an aboriginal driver in 41.2% of cases where the race of the driver was recorded.

These figures should be contrasted with the population statistics: in 1986, 1.0% of the population of Perth were aborigines, while for WA as a whole, aborigines aged 10-19 years comprised 4% of the total population in this age range (Australian Bureau of Statistics, 1989). Assuming the figure of 4% applies to Perth, the overrepresentation of aborigines in pursuits is about 10 to 1.

This appears to reflect the overrepresentation of aborigines in motor vehicle theft and traffic offences (such as driving unlicensed), although an even higher proportion of apprehended motor vehicle thieves are aborigines (47.9% compared with 38.2% in pursuits).

Number of passengers. Another common stereotype of pursuits is that the offending vehicle is packed with kids. However, in 103 pursuits out of 179 where the number of occupants could be determined (57.5%), there were no passengers.

Offenders’ driving behaviours. Police reports of pursuits refer frequently to the erratic and dangerous driving practices of offenders, and their efforts to throw off police. In 42 out 213 pursuits where such information was recorded (19.7%), offenders attempted to obstruct, deter and injure police by throwing objects at the police vehicle or by sideswiping or ramming the police. This represented 12.1% of all pursuits.

Similarly, police reported that in 34 pursuits (9.8%) the offender caused other motorists to take evasive action to avoid a collision. The true incidence is probably higher, since the High Speed pursuit form does not explicitly require this information.

Stolen vehicles. As noted several times already, in cases where the status of the vehicle was known, 70.1% (178 out of 254) were stolen. A charge of “unlawfully use motor vehicle” (UUMV) was preferred in 109 cases (31.5% of all pursuits, and 14.5% of all charges), and “unlawfully drive motor vehicle” (UDMV) in 81 cases (23.4% of pursuits and 10.7% of charges).

This is a very high rate of stolen vehicles compared with South Australia, where drink-driving seems to be the main issue and stolen vehicles do not rate a mention (40% of SA cases involve drink-driving according to Murray, 1987, and more than three-quarters according to Brewer and McGrath, 1990). Similarly, relatively few pursuits in the U.S. seem to involve stolen vehicles, with drunken and unlicensed driving being the major offences (Beckman, 1983; Fyfe, 1990). One reason why stolen vehicles do not figure as highly in pursuits in the U.S. may be that many police forces have guidelines which prohibit or restrict chasing stolen vehicles (Beckman, 1983; Murray, 1987).

Offenders’ vehicles. In nearly two thirds of pursuits (65.9%) the pursued vehicle was a sedan, and in 18.2% of pursuits it was a motorcycle. The most common vehicle makes were Holden (41.6%), Ford (25.3%), Suzuki (5.2%),
Honda (3.9%), and Kawasaki (3.6%). More than a third (35.0%) were under 5 years old, with the oldest vehicle being manufactured in 1963. The median age was 5 years.

The makes of the vehicles correspond closely to those stolen (e.g. Holden, 45.0% and Ford 21.0%), but it appears that pursued vehicles are some 5 years newer on average than vehicles stolen. This fits with pursuit offenders’ comments that they steal newer and more powerful vehicles to get away from police in case they get into a pursuit. Perhaps the more recent vintage of pursuit vehicles also reflects the fact that 30% of pursuits involve traffic offenders driving their own vehicles.

Of the motorcycles involved (42), 26.2% were under 250 cc. For cars, 17.9% exceeded 4 litres in capacity, and 14.9% were 2.2 litres or less.

**Drug and alcohol impairment.** In Perth, only 22.9% of offenders were charged with drink-driving related offences (exceed .08%, DUI, or refuse breath test). Given what is known about drinking and driving in Western Australia (Homel, 1988; 1990), this low rate is very surprising, and is lower than in South Australia and U.S. jurisdictions (Fyfe, 1990; Murray, 1987). The proportion of offenders charged with drug offences was negligible (3 charges out of a total of 754).

However, comments by a number of police officers in the focus groups help to put the figure in perspective. In commenting on drug and alcohol charges, they asserted that they frequently do not charge offenders because: (i) these charges add nothing to the penalty, reckless driving being the main charge; (ii) they feared that if the offender were to be convicted of impaired driving, the impairment could be argued in mitigation with respect to the reckless driving charge; and (iii) it is simply too much trouble to find a trained breath analysis operator or (in the case of drug charges) to obtain a blood test.

It seems therefore that the level of drinking and driving (and drug impairment) is considerably understated in the records. This conclusion would certainly be consistent with the comments of the offenders who were interviewed, most of whom confessed to drug or alcohol impairment at the time of the pursuit. Consider the following comments from one of the juvenile offenders I interviewed:

*How did the chase happen? What were you doing at the time?*
There was me and my friend .... and a few other kids. We'd been on a few drugs - Serepax, and we weren't really to it and we went out looking for cars and we ended up getting a car in Cannington (Commodore with full tank). We did not know what to do - our minds were pretty, you know, we weren't all there. Serepax makes you go real violent sort of thing - smash things up ... Sleep, dizzy spells ...
Just went driving around and that.

*How did the police spot you?*
The paddy waggon came behind - we all panicked because, you know, the drugs - we weren't all there - you know - type of thing - panicked. Driver took off straight away on wrong side of road - fair bit of traffic. Saw TX5 Turbo at intersection - only five of them in Perth. Went through red light, then they chased us (the turbo).

Not all offenders confessed to this degree of impairment, but drug and alcohol use was a fairly consistent feature of the chase scenario and also of the offenders’ lives generally.
Several issues arise from the information on drugs and alcohol. First, it should be a matter of concern to the community that significant numbers of juvenile drivers are grossly impaired by drugs such as Serepax and amphetamines. Although the effects of drugs vary, there is evidence that amphetamine use can be associated with unprovoked, random and often senseless violence (Asnis & Smith, 1978). This would fit the descriptions of many of the chases in Perth. The potential of alcohol in regard to accidents and violence is even more well known (Homel, 1988; Graham, 1984). Even prescription drugs (especially tranquillisers), when combined with quite moderate amounts of alcohol, can greatly increase the risk of road accidents (McPherson et al, 1984).

Given the extent of drug and alcohol impairment of the offenders, the question immediately arises as to the appropriateness of attempting to apprehend them through high speed pursuits. Are these offenders not already dangerous enough, without magnifying the risks to the community by chasing them at high speed? Once again the tension between the overall goal of protecting life and property, on the one hand, and the police duty on the other hand to apprehend offenders, is vividly illustrated.

Finally, should police neglect investigating the issue of drug and alcohol impairment when an offender is apprehended, as seems to be the case in Perth, at least in some instances? Probably in the case of drugs the very real difficulties facing police in proving impairment outweigh any benefits to the offender or to the community in obtaining a drug conviction. This is especially the case since there is no equivalent of RBT for drug-driving, which is therefore very hard to deter. However, it is difficult to be sympathetic to the police point of view in the case of alcohol, for which equipment is readily available and procedures for proving impairment are well established. Moreover, the deterrence of alcohol-impaired driving has proven social benefits. It is therefore recommended that:

*Police should in all cases be required to carry out a preliminary breath test on drivers apprehended as a result of high speed pursuits. This should be followed by breath analysis when appropriate.*

**Other charges.** As expected, most drivers apprehended were charged with reckless driving (129 cases, or 37.3% of all pursuits), while all were (of course) charged with "fail to stop." After UUMV and UDMV, reckless driving, and fail to stop, the most common charge was no motor driver's licence (no MDL: 92 cases, or 26.6% of all pursuits).

There were very few charges for criminal offences which could be interpreted as involving violence or the threat of violence. In only three pursuits did an apprehended offender possess a firearm or other weapon, and at most 30 of a total of 754 charges related to assaults. Most of these charges involved assault to prevent arrest (16 charges usually arising from the practice of throwing objects at police or their vehicles) or assault of a

relate to stealing from cars, houses or business premises (52 charges: 6.9%
of the total of 754 charges, and 15.0% of all pursuits). Many of the stealing offences were of course associated with motor vehicle theft, given that cars are often stolen to provide transport for stolen goods.

### Classification of Pursuits

It is clear that nearly all pursuits can be classified into one of two types, based on the charges preferred against apprehended offenders. One group of pursuits involves motor vehicle thieves (113 pursuits), while the other group involves traffic/drink-driving offenders (53 pursuits). This latter type of pursuit generated only 7 of the assault charges, suggesting that when car thieves are apprehended there is a greater risk of violence. In an additional 8 pursuits, offenders were charged with stealing offences but not UUMV or UDMV. It is probable that the stealing charge was for car theft, so these cases are probably appropriately classified with the car theft group. In one final pursuit the offender was charged with cannabis offences in addition to drink-driving.

In summary, assuming all pursuits are similar to those in which an offender is apprehended (not completely valid, of course):

There are two groups of pursuits: those involving car thieves and those involving traffic/drink-drive offenders. Those involving car thieves take place 2.3 times more often than those involving traffic offenders: car thieves generate 70% of pursuits, traffic offenders 30%. Car thieves are more likely to be charged with assault when apprehended than the traffic offenders, but the overall incidence of violence is low. Car thieves commit traffic offences and sometimes other stealing offences, but traffic offenders are nearly always charged only with traffic offences.

Given this simple profile, one is forced to question the danger to life and property entailed in high speed pursuits. Does the apprehension of a young, unlicenced motorist who has committed no other offences other than those arising out of the pursuit justify putting his life and the life of police and other motorists at risk? The answer in terms of simple justice is surely “no.” I would argue that the answer is also “no” on the grounds of deterrence. In the light of very extensive research on the deterrent impact of traditional traffic law enforcement - that is, law enforcement which concentrates on the detection and apprehension of offenders - one would be forced to conclude that the deterrent effect of pursuits, either general or specific, is minimal (Homel & Wilson, 1987). Only highly visible, publicised law enforcement like RBT has been demonstrated to achieve substantial levels of deterrence.

Motor vehicle theft poses a more serious problem for this argument than traffic offences, since it is regarded by the public as a more serious offence. However, is motor vehicle theft perceived by the community as an offence of sufficient seriousness to warrant pursuits of the kind which occur every day rate, on a 5-point scale, the priority for police issues of each of 15 offences.
Murder, as expected, received the highest rating (4.6), while controlling prostitution received the lowest (2.53). Car theft ranked 9th out of 15, with a mean rating of 3.85. Traffic violations received a mean rating of 3.15 (13th). Car theft was ranked behind assaults, child abuse, distribution of hard drugs, juvenile crime, breaking and entering, and vandalism. It seems clear that while motor vehicle theft is regarded as an issue for policing, it is by no means regarded as the top priority.

**FACTORS RELATED TO CRASH OUTCOMES AND TO THE APPREHENSION OF OFFENDERS**

What factors make some pursuits more dangerous than others? Are all pursuits equally dangerous? In what situations are offenders most likely to be apprehended?

The California Highway Patrol study found that a range of factors which might reasonably be expected to influence the likelihood of an accident did not in fact have much predictive power (Auten, 1985). Thus factors such as time of day, locale, and violator's age had no effect in California on the accident rate or severity of accidents, and nor did they influence the apprehension rate.

If accident risk factors can be identified from the Perth data, and contrasted with factors which predict the apprehension of the offender, sound policies which are firmly based on scientific analysis can be developed. That was the objective of the analyses reported in this section.

**Method**

A total of 31 factors, derived from the pursuits data base, were analysed. These are listed on the next page. Most of these variables have been described already. For statistical purposes, in some cases categories have been combined. For example, medium and heavy traffic conditions were combined to yield a category with sufficient cases for analysis.

Four crash indices were constructed: (a) whether there was any damage overall (118 pursuits, or 34.1%); (b) whether there was a serious accident which was not caused by deliberate actions of the offenders (48 cases, which was 15.1% of the 319 pursuits in which no deliberate damage was caused); (c) whether a police vehicle was damaged (52 pursuits, or 15.0%); and (d) the amount of damage to police vehicles for police accident cases only (52 pursuits).

A “serious accident” was defined as one which was at least level 3 on the 5-point damage scale discussed previously. This point was chosen since it represents a level at which most observers would agree the accident was serious.
Predictors of Crash Outcomes and the Apprehension of Offenders

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Overall damage</th>
<th>Serious accident</th>
<th>Police accident</th>
<th>Amount of police damage</th>
<th>Offender apprehended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month</td>
<td></td>
<td></td>
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<td>.26</td>
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<td>Day of week</td>
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<td></td>
</tr>
<tr>
<td>Duration</td>
<td></td>
<td></td>
<td></td>
<td>.11^a</td>
<td></td>
</tr>
<tr>
<td>Traffic</td>
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<td></td>
<td></td>
<td>.17</td>
<td></td>
</tr>
<tr>
<td>Weather</td>
<td></td>
<td></td>
<td></td>
<td>.18</td>
<td>.14</td>
</tr>
<tr>
<td>Surface cond.</td>
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</tr>
<tr>
<td>Surface type</td>
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<tr>
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<td>.28</td>
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<tr>
<td>Reason for pursuit</td>
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<td>.34</td>
<td></td>
<td>.28</td>
<td></td>
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<tr>
<td>Duty inspector</td>
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<tr>
<td>Police driver sex</td>
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<tr>
<td>Police driver age</td>
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<tr>
<td>Pursuit trained?</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Police vehicle type</td>
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<tr>
<td>Offender's veh. age</td>
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<td>.20</td>
</tr>
<tr>
<td>Stolen vehicle?</td>
<td>.34</td>
<td>.18</td>
<td></td>
<td>.20</td>
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</tr>
<tr>
<td>Max. speed</td>
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<td>.42^a</td>
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<td>Offender app.?</td>
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<td>.18</td>
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<td></td>
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<tr>
<td>Attempt inj. police</td>
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<td>.54</td>
<td></td>
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<tr>
<td>Evasive action?</td>
<td>.15</td>
<td>.19</td>
<td></td>
<td>.11</td>
<td>.22^a</td>
</tr>
<tr>
<td>Females in car?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.16</td>
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<tr>
<td>Reckless charge</td>
<td>.19</td>
<td>.14</td>
<td></td>
<td></td>
<td>.11</td>
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<tr>
<td>Drink-drive charge</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>No MDL charge</td>
<td>.24</td>
<td>.15</td>
<td></td>
<td>.15</td>
<td></td>
</tr>
<tr>
<td>Off. driver age</td>
<td>.12</td>
<td>.24</td>
<td></td>
<td>.13</td>
<td></td>
</tr>
<tr>
<td>No. passengers</td>
<td>.13</td>
<td>.27</td>
<td></td>
<td>.15</td>
<td></td>
</tr>
<tr>
<td>No. aborigines</td>
<td>.19</td>
<td>.27</td>
<td></td>
<td>.26</td>
<td></td>
</tr>
<tr>
<td>No. police vehicles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Driver's race</td>
<td></td>
<td></td>
<td></td>
<td>.27</td>
<td></td>
</tr>
</tbody>
</table>

^a Coefficient is based on the R² value in a oneway analysis of variance.
Results of all analyses are summarised on the preceding page. A blank cell indicates that there is no statistically significant association between the predictor factor in that row and the outcome variable in that column (at the 5% level of significance). Where there is a number, it represents the strength of correlation between the predictor and the outcome. The measure of correlation is in most cases Cramer's V coefficient, which is based on the chi-squared test and varies between 0 (no association) and 1 (perfect association). A value exceeding .30 can be regarded as indicating a moderate to strong relationship.

Interpretation

The reason for pursuing. There is a two thirds chance of damage when the reason for pursuing is a crime event or a stolen vehicle, compared with less than a one third chance when the initial reason for the pursuit is a traffic offence. This is consistent with recent U.S. research: Alpert (1987) found that accidents occurred more often in the chases started by serious events than in those started because of traffic offences.

This pattern holds both for serious accidents where damage was not caused directly by the offender, and for damage to police vehicles, when the damage is often caused deliberately by the offender. For both these crash outcomes, the incidence of damage when the pursuit was initiated because of a crime event or a stolen vehicle was between 30% and 50%, while it was only around 10% for all other pursuits.

What this seems to mean is that when chases are initiated by crimes and by stolen vehicles, there is more risk of an accident in the traditional sense of a crash occurring when it was not intended, and also more risk of damage deliberately caused by offenders.

Weather and road surface type. Serious accidents occurred in 32.0% of pursuits taking place in wet weather, compared with 14.4% in fine conditions. Although only 9 pursuits went onto gravel roads, 44.4% of these involved damage to police vehicles, and 50.0% involved a serious accident (excluding one pursuit in which damage was deliberately inflicted). It is worth noting that offenders were no more likely to be apprehended in wet weather or when pursuits went onto gravel roads.

The policy implications of these correlations are obvious. It is recommended that:

Category B pursuits should not be carried out in wet weather, and they should be aborted by the driver as soon as gravel or off-road conditions are encountered.

Whilst it might be argued that a prohibition on pursuits in wet weather is too draconian, especially since two thirds of pursuits in these conditions did not

Duration of the pursuit. The duration of a pursuit and the speeds attained by
police and offenders are two factors which Headquarters Duty staff and police drivers and passengers are constantly aware of. Conventional wisdom would suggest that the longer a pursuit and the higher the speeds, the greater the risks.

However, neither of these factors is particularly important in predicting pursuit outcomes. Only in the case of police accidents does duration become statistically significant, and even here the significance is marginal (p = .050). The median duration of pursuits not ending in damage to police was 3 minutes, compared with 4 minutes for the damage pursuits. Further examination of the data reveals that this difference was due to two long pursuits (one over an hour in duration) in which offenders rammed police vehicles. Most other pursuits leading to police damage were relatively brief.

Further analysis is required before one can be certain of the role of duration. For example, it may be that if short pursuits are excluded, duration is significantly associated with a crash outcome. The argument here would be that once a pursuit gets beyond a certain point different risk factors come into play, and that the longer the pursuit the more these factors apply. However, on the basis of the simple analysis presented here, it seems that short pursuits are as risky as long ones.

This finding is relevant to the debate amongst police concerning the value of forcible stopping techniques. One line of thought is that if pursuits can be terminated quickly by “spinning out” the offender, or in some way disabling him, then danger to the public and to the police is minimised. It is argued that this can be done safely, using a variety of techniques. However, the analysis suggests that with the exceptions noted above, long pursuits are no more dangerous than short pursuits, using actual accidents as a criterion. To some extent this result is contrary to common sense expectations, but perhaps it partly reflects the ability of police to drive for long periods at high speeds without having an accident - the major objective of advanced driver training.

In addition, the U.S. literature is unanimous concerning the dangers of forcible stopping. For example, Auten (1988) states:

The available research makes it clear what should have been obvious from the outset:

1. the use of forcible stop techniques results in high suspect capture rates and
2. their use is likely to result in traffic collisions with deaths and injuries. (p. 38).

All other authors I have consulted emphasise the dangers of forcible stopping, and many written pursuit policies in the U.S. prohibit their use or restrict their use to life threatening situations (Beckman, 1983; Fyfe, 1990; Shuman & Kennedy, 1989).

Although I am very sympathetic to the basically humanitarian concerns which underlie the argument for swift termination of a pursuit, I am equally sympathetic to the need for the police to use their best judgment in any given situation. This is not a simple matter of risk assessment.

Current restrictions on the use of forcible stopping techniques in Western
Australia should be retained.

Maximum speed. Speed did not predict any accident outcome, but it did predict the amount of damage when an accident involving a police vehicle occurred. The correlation between maximum speed and the logarithm of the damage was \(0.413\) \((p = .005)\). (The logarithm of the damage was used because the distribution of damage was extremely skewed. The transformation helped to make the relationship with speed linear.)

A regression analysis was carried out to predict the amount of damage to police vehicles. This analysis included the three variables which were significantly related to damage: maximum speed, type of police vehicle, and whether or not the offenders attempted to injure or damage the police. No other factors were statistically significant.

The model explained 41\% of the variance, and was therefore quite useful for predicting the level of damage. The table below shows predicted damage for an accident involving a Traffic Branch vehicle, broken down by speed and by attempts by the offenders to injure police.

<table>
<thead>
<tr>
<th>Speed</th>
<th>No attempt to injure</th>
<th>Attempt to injure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not recorded</td>
<td>567.87</td>
<td>1076.96</td>
</tr>
<tr>
<td>60-80</td>
<td>124.97</td>
<td>237.01</td>
</tr>
<tr>
<td>81-120</td>
<td>273.50</td>
<td>518.69</td>
</tr>
<tr>
<td>121-140</td>
<td>477.47</td>
<td>905.51</td>
</tr>
<tr>
<td>141-160</td>
<td>559.81</td>
<td>1061.67</td>
</tr>
<tr>
<td>161-200</td>
<td>666.61</td>
<td>1264.21</td>
</tr>
</tbody>
</table>

It is clear that damage increases rapidly with maximum speed, particularly when offenders deliberately cause some of the damage.

Since maximum speed is not correlated with accident risk but only with the amount of damage when a police accident occurs, there are no compelling grounds for recommending that arbitrary speed limits on police be imposed. It is frequently argued that such limits fail to recognise the extremely variable traffic and road conditions which can be encountered, and would in any case send a clear signal to offenders to drive beyond this limit (Murray, 1987). I am in sympathy with these arguments. It is accordingly recommended that:

Police officers should be appraised in training sessions of the direct connection between maximum speed and the amount of damage in police accidents. However, as noted previously, General Duties
and Division 79 officers were less likely to complete pursuit forms when a police accident occurred. The findings with respect to police vehicle type and damage to police vehicles are therefore not considered sufficiently reliable to justify interpretation.

**Pursuit driver training.** Police drivers with advanced driver training tended to have more accidents than non-pursuit trained drivers, but the difference was only statistically significant for accidents involving police vehicles. The accident rates for the two groups are contrasted in the diagram below.

As can be seen from the diagram, the difference between the two groups is least marked for serious accidents which exclude deliberate damage by offenders, and most marked for police accidents. This suggests that the worse record of pursuit trained drivers may be attributable to their involvement in pursuits in which offenders attempt to injure police.

*Relationship between police pursuit training and accidents*

It is possible to test this hypothesis by carrying out a form of statistical analysis known as *logistic regression*. This involves constructing a statistical model which relates the odds of a police accident to whether or not the driver is pursuit trained, controlling statistically for the role of other variables such as attempts by offenders to damage police vehicles. Logistic regression is similar to standard regression, but differs in that the dependent variable is *binary* (an accident or no accident) and maximum likelihood techniques are used to estimate the model.

The hypothesis was confirmed by the logistic regression analysis, indicating that police pursuits were more likely to involve aborigines in the offender's vehicle (*p* = .08).
What this means is that pursuit trained drivers are more likely to continue pursuing when the offenders are aborigines, when other motorists have to take evasive action, and when the offenders attempt to ram or otherwise damage the police vehicle, and that these factors (particularly the last) explain their worse accident record.

It is possible to follow this line of argument a little further, and test whether pursuit trained drivers actually have better records when the fact that they engage in riskier pursuits is taken into account statistically. However, this hypothesis was not confirmed.

*Training is simply irrelevant to the outcome of a pursuit, no matter how many factors are included in the model in an attempt to equalise statistically the kinds of pursuits which trained and non-trained drivers engage in.*

The finding that advanced driver training increases accident risk, or at best makes no difference, is not an unusual one in road safety research generally. For example, Williams & O’Neel (1974) evaluated the traffic violation and crash records of a sample of racing car drivers in the United States (all of whom had, of course, received advanced driver training). They found that racing drivers had higher numbers of crashes and violations in every category analysed, compared with a sample of non-racing drivers matched on age, sex, race, and number of miles driven. (It is noteworthy that the most vociferous advocates of advanced driver training are often those who stand to make some money out of training drivers.) In the present context, several suggestions have been made to me to explain the result.

One argument is that advanced driver training takes place on a race track, and not in the “real world” environment. Related to this is the view that while advanced driver training concentrates on technical skills like skid control and evasive tactics (its aim, after all, is to teach police to drive safely at high speeds), the skills actually required for safe driving, particularly in a pursuit situation, have more to do with attitudes, mental approach, and with the ability to make swift judgements and see the “total situation” (Buckley, 1987). As an extension of this last point, some would argue that advanced driver training exacerbates the tendencies toward “macho” attitudes and behaviours which are exhibited by many young men, including police.

There is probably truth in all these arguments. The fact remains, however, that the WA Police Service is investing a considerable amount of money in pursuit driver training, and this investment appears not to be paying off in terms of reduced accident risks or even in terms of higher rates of apprehension of offenders. On the other hand, it does need to be recognised that many pursuits cover many kilometres at high speeds without incident, and that without advanced driver training at least some of these pursuits might end in disaster. Moreover, advanced driver training may be of value in other areas of policing.
need to be trained to recognise the warning signals that a pursuit is likely to end in an accident and be given the personal and social skills and resources required to act appropriately. As Fyfe (1990) observes, officers should be trained to be able to decide what to do in pursuit situations before they actually occur.

In particular, officers need to be given support and instruction in how to pull out of a pursuit without being considered "wimps" by their peers (Shuman & Kennedy, 1989). As noted previously, routine administrative appraisal of pursuits and direct discussions with the officers involved could aid in the process of building attitudes and habits which promote road safety. Road safety targets of the kind discussed previously could also be a powerful tool at the organisational level.

**The offender's driving.** As noted previously, when offenders cause other motorists to take evasive action an accident is more likely to ensue (31.7% vs. 55.6%). For serious accidents the contrast is 12.8% vs. 36.7%, and for police accidents it is 13.8% vs. 26.5%.

The figures for attempts to injure police are: 27.3% vs. 83.3% (any accident), 13.3% vs. 47.1% (serious accident excluding deliberate damage), and 7.9% vs. 66.7% (police damage). The connection between damage to a police vehicle and the deliberate actions of offenders is particularly strong: 28 out of 52 such incidents involved deliberate attempts by offenders to wreak damage.

Offenders are more likely to be apprehended when other motorists are forced to take evasive action (47.7% vs. 71.4%) and when the offenders attempt to damage the police (48.7% vs. 67.7%). The cost in terms of accidents is, however, rather high. Does the apprehension of the offender justify the added costs and the higher risks of serious injuries to third parties?

**Apprehension and accidents.** There is a direct correlation between catching one or more offenders and an accident occurring. Nearly half (48.0%) of all pursuits in which an offender is apprehended result in an accident, compared with 19.9% when an offender is not caught. The statistics for serious accidents are 21.8% vs. 8.6%. There is no correlation between catching offenders and damage to police vehicles, which suggests that many offenders are apprehended after they lose control and have an accident.

**Offender characteristics (especially race).** Without going into too much detail, the results can be summarised by saying that accidents are more likely when offenders are caught and charged with reckless driving or driving without a licence. If they are young (59% of apprehended juveniles had an accident, compared with 40% of offenders 18 and older), if there are two or more passengers (71% accident rate, many serious), and if there are two or more aborigines in the vehicle (75% accident rate, more than half involving a police vehicle).
In understanding why this is so, it is important to recognise the role both of deliberate violence (ramming, throwing objects back at police, and assaulting police) and also of a host of factors which contribute generally to high rates of traffic accidents amongst aboriginal populations. As Williams and Maisey (1990) observe, many accidents involving aboriginals are characterised by non-compliance with road traffic laws or road safety sense, high blood alcohol levels, and non-use of seat belts.

The findings with respect to aboriginal offenders surely underline the importance of improving relations between police and aboriginal people. They also underline the importance of programs which provide aboriginal youth with a wider range of alternatives in life. My interviews with four aboriginal offenders confirmed many of the popular stereotypes: cars are stolen to steal liquor, the offences are committed in groups, the favoured target is a Commodore, and the offenders are frequently impaired by alcohol or high after glue sniffing.

The interviews highlighted the pivotal role of poverty and drug and alcohol abuse in the lives of these offenders, and provided no basis for believing that pursuits, or law enforcement generally, had any deterrent value. Most aboriginal youths I spoke to (all young, around 13 or 14) had little concept of private property, not much idea about the future, and apparently little capacity to organise their lives or respond to threats and incentives.

One program for aboriginal youth which I had an opportunity to observe was the Aboriginal Driver Training Programme at Clontarf Aboriginal College in Perth (Bridge, 1989). Although this is only one program among many for aboriginal people, it does address one of the key problems, namely the high imprisonment rate of aborigines for driving without a licence. If aboriginal youths can be trained to get a licence when they are of age or legally eligible, they are more likely to be able to get a job and therefore have the economic resources to buy their own vehicles, and they can of course avoid arrest for driving without a licence. Moreover, they have an incentive not to be caught for traffic or other offences because they do not wish to lose their licence.

Police Traffic Branch already participates in this kind of training, and through community policing initiatives many programmes are being developed by the Department to bridge the gap between police and the aboriginal community. Even if only a few of the violent high speed chases involving aboriginal youths can be prevented through these kinds of initiatives, they will have more than justified their existence. It is therefore recommended that:

The Department should continue its support for and development of programs which improve relationships with the aboriginal community and prevent aboriginal youth from coming into conflict with police. Aboriginal driver training programs should be a priority, so that aborigines may obtain a licence and learn the basics of traffic laws and safe driving practices. In order to achieve these ends, it is recommended that the Department develop close working relationships with other relevant government departments.

The offender’s vehicle. In only 1 case out of 42 in which the pursued vehicle was a motorcycle was a police vehicle damaged. It seems therefore that
offenders can do little damage to police when they are riding a motorcycle.

Offenders had a better chance of getting away when they were driving a new model vehicle (presumably stolen). Thus only 47.1% of offenders in vehicles less than 6 years old were apprehended, compared with about 67% of those in older vehicles. Offenders themselves are well aware of this. In the interviews several mentioned that they stole new and powerful models so they could get away from police if they got into a pursuit. However, young aboriginal offenders were more likely to steal older vehicles, so the relative rates of apprehension may partly reflect offender as well as vehicle characteristics.

**Drug and alcohol impairment.** Very few offenders were charged with drug offences, and so it is not possible to assess statistically the role of drug impairment in causing accidents. Moreover, as noted previously only 22.9% were charged with drinking and driving, which is a low rate in comparison with other jurisdictions and possibly reflects police reluctance in some cases to investigate alcohol impairment.

Drinking and driving was not related to accident risk, which is a surprising outcome in view of what is known of the effects of alcohol on driving (Homel, 1988). This result may, however, partly reflect the fact that in the present data base a drinking and driving charge is not a reliable measure of actual impairment.

**Factors related to apprehension.** As noted earlier, pursuits involving deliberate attempts to damage police vehicles or which required other motorists to take evasive action were more likely to result both in an accident and in the apprehension of offenders. The offender’s vehicle was nearly always damaged when an accident occurred.

Other factors predictive of the apprehension rate were the age of the offender’s vehicle (as noted above, offenders in older vehicles were more likely to get caught), the day of the week (Tuesdays and Wednesdays were the least successful days for the police), the time of the pursuit (apprehension was markedly less likely between 2.00 a.m. and 5.00 a.m. than at other times), and the power of the offender’s vehicle (offenders in vehicles exceeding 4 litres engine capacity got away more often). The time and day of week effects probably reflect police rostering practices, although it is possible that clear roads in the early hours of the morning worked to the offenders’ advantage.

**Police driver’s age.** Age was not related to any crash outcome, which suggests that young drivers should be restricted no more than older drivers in participating in pursuits.

**The Key Factors**

In order to identify the major factors contributing to serious accidents or to accidents involving police, a further series of logistic regression analyses was carried out. Using this method, it was possible to exclude factors which, while correlated with an accident outcome, did not appear to be the key contributing factors. Thus it turned out, for example, that the offences with which an offender was charged simply reflected other variables like race and
the reason for the pursuit, and that these factors were better able to predict accident occurrence.

For serious accidents, excluding deliberate damage by offenders, the key factors emerged as: (a) the reason for initiating the pursuit; (b) the need for other motorists to take evasive action; and (c) attempts by the offenders to injure or damage police. It is noteworthy that this last factor remained significant, despite the fact that damage due to the deliberate actions of offenders was excluded. What the result means is that even in cases in which offenders do not succeed in their attempts to cause damage to the police, the outcome of the pursuit is much more likely to be an accident.

The reason for the pursuit remained as a key predictor of the outcome, which is of some importance for policy purposes. Chasing stolen vehicles is risky, but the model shows that this is mainly because a proportion of these offenders attempt to damage the police and drive in a reckless manner causing other motorists to take evasive action. If pursuits were aborted as soon as these contingencies arose, chasing stolen vehicles would be safer than chasing traffic offenders. However, controlling for the other factors in the model, chasing because of a crime event or a crime in progress remains a good indicator that an accident will occur. Although chases are not initiated for these reasons very often, police managers should be aware that they are likely to result in accidents.

The model predicting whether or not a police vehicle would be damaged also reduced to three factors: (a) attempts by the offender to damage police; (b) the reason for the pursuit; and (c) the number of aborigines in the offending vehicle. This model partly reinforces what we have already learned, namely that a major reason for damage to police vehicles is deliberate actions of the offenders, and the more aborigines in the vehicle the greater the likelihood of damage. In addition, the model confirms that when these factors are taken into account, chasing stolen vehicles is safer than chasing for other reasons, but chasing for traffic offences and for “crimes in progress” are about equally risky.

In terms of practical implications, police managers need to be aware that accident risk (but not the likelihood of catching an offender) is directly linked with the reason for initiation of the pursuit. Chasing traffic offenders is safer than chasing motor vehicle thieves because the latter group try to damage police vehicles and they drive in an erratic manner dangerous to other road users. Chasing stolen vehicles could be made safer by aborting pursuits when either of these two events occur, in which case chasing because of traffic offences or because of a crime in progress would become the most risky categories.

These findings concerning the key importance of the reason for the pursuit as a predictor of an accident outcome highlights the need for all officers involved in high speed pursuits to report in detail the initial reason for the pursuit. The present results are based on only a 50% reporting rate for this factor.
CONCLUSION

High speed pursuits are very common in Perth, with around 700 per year. The best evidence suggests that on a per capita basis there are more pursuits in Perth than in Adelaide or Sydney, and the number is increasing. Not only do Perth police engage in pursuits more frequently, they attain higher speeds than in the other capital cities.

Several hundred traffic offenders and car thieves are apprehended each year as the result of high speed pursuits, although offenders have a 50% chance of escaping. It is rare to capture someone who has committed a serious crime such as drug dealing, rape, armed robbery, or serious assault. A tragic aspect of the present situation is that aboriginals are vastly over-represented amongst the offenders, and amongst those who are killed and injured.

The cost of apprehending these offenders is somewhere in the vicinity of $1,000 per pursuit, or $2,000 for each pursuit in which an offender is apprehended. The direct cost to the community in terms of damage to police vehicles is over $200 per pursuit. More than one third of all pursuits end in some kind of damage. Thus in terms of accidents, deliberate damage, and injuries, high speed pursuits in Perth cost the community the best part of a million dollars per annum.

Is the community getting its money's worth? Is this even a legitimate question to ask?

The Moral Calculus

The analysis demonstrated very clearly that pursuits involve two type of offenders: traffic offenders/drink-drivers who are rarely charged with offences of any greater seriousness, and car thieves who may also be charged with traffic offences and with other stealing offences, and sometimes with assault charges arising out of their actions during the pursuit.

Is the apprehension of these offenders the "proportionate good" which justifies the dangers to life, limb and property which have been documented in this report? The answer which many police officers have given when I have asked them this question is a qualified "no." They argue that while just charging traffic offenders and car thieves does not justify pursuits, pursuits are justified either as "fishing expeditions" - occasionally something quite serious emerges after a pursuit - or in terms of the potential offenders who are deterred by present pursuit practices.

The first argument - justifying pursuits on the grounds of suspicion - has been rejected by most authorities in the field, as the discussion in the first section made clear. The general consensus seems to be that a high speed pursuit is justified on moral grounds only if a serious crime has been known to have been committed.

The second argument, concerning deterrence, is much more difficult, since we simply don't know with any degree of scientific reliability what the general deterrent effects of high speed pursuits are. The police belief that there would be an epidemic of car theft and traffic crime may or may not be well founded (Homel & Wilson, 1987).
In the final analysis, senior management in the West Australia Police Service have to take responsibility for deciding the grounds on which high speed pursuits are justified. At the moment nothing is spelled out in writing, and the justification for pursuing in practice is that the offender who flees may be concealing something really serious.

One way forward would be to conduct an experiment. We know that 30% of all pursuits involve only traffic offenders. Why not try a policy for, say, three months, of not chasing when there is no direct evidence that the vehicle has been stolen and the only offences which have been committed are traffic violations? This would effectively cut out high speed pursuits involving traffic offenders and also a proportion of those involving car thieves. Of course this change in policy would not be announced publicly.

Since about 95% of car thefts are reported to the police, there is a high quality data series which could be used to evaluate the effects of the policy on motor vehicle theft rates. Although it would be more difficult to evaluate the impact on traffic offence rates, drink-driving violations and speeding offences could be used as reasonably reliable indices. A more reliable and valid index could be traffic crashes and injuries.

It is therefore recommended that:

For a period of three months the Department cease high speed pursuits when the only offences known to have been committed are traffic violations. The effects of this policy on motor vehicle theft rates, speeding and drink-driving offence rates, and on traffic crashes and injuries, should be evaluated scientifically.

Following the results of this experiment, there may be good grounds for following the lead of some overseas jurisdictions and restricting pursuits to life-threatening situations, excluding traffic offences and stolen vehicles as reasons for pursuing.

**Written Guidelines**

Much has been said about guidelines in this report. A strong theme to emerge from the literature is the need for a set of written guidelines on high speed pursuits which covers much more territory than the guidelines currently in use in WA (Fyfe, 1990).

In the light of the literature and the data analyses set out in this report, it is recommended that:

The High Speed Pursuits Taskforce be charged with the responsibility of developing further the written guidelines governing high speed pursuits. Particular attention should be paid to the risk factors analysed in this report.

It is recommended that the guidelines incorporate the elements identified by Shuman and Kennedy (1989) as usually missing from police pursuit policies: (1) the mission statement of the WA Police Service; (2) the need for the supervisor to deal with the "psychological aspects" of pursuits; (3) how to terminate a pursuit; and (4) mandatory administrative review of all high
speed pursuits.

It is further recommended that the Taskforce heed Murray's (1987) emphasis on working with junior officers in the formulation of the guidelines and the need to incorporate a strong educative component so that officers understand the reasons for the guidelines.

Training

It is recommended that:

The training program on the theory of high speed police pursuits conducted by Traffic Branch be expanded to at least a three day course, and that it be made mandatory, over time, that all officers who may be engaged in high speed pursuits attend. This course should cover the present material, as well as relevant research on pursuits, and should emphasise the understanding of the expanded written guidelines developed by the High Speed Pursuits Taskforce.

Record Keeping

It is recommended that:

The High Speed pursuit form be revised along lines recommended by the High Speed Pursuits Taskforce and Traffic Branch, and that the information on these forms be computerised so that trends and patterns in pursuits can be quickly identified. It is also recommended that this data base be linked with the computerised data base which should be developed by the Police Accident Records Section, and that the High Speed pursuit records be used as a basis for the mandatory administrative review of all pursuits.
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presented at Multi-state Seminar on Anti-theft/Foot Patrol Matters, Police Academy, Goulburn.


Homel, R. (1990, June). Random breath testing and how to get it to work properly. Paper presented at the Inaugural Annual Conference of the Road Accident Prevention Research Unit, University of Western Australia, June 11, 1990.


NSW Police Service (undated). *Urgent duty, traffic law enforcement and pursuit motor vehicle operation policy* (Draft document). Sydney: NSW Police Department.


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COMMUNICATIONS BRANCH

PURSUITS

DATE: 26/05/19

TIME COMMENCED: 1733 HRS.
COMPLETED: 1736 HRS.
OPERATOR: 0559.
CHANNEL: 47

PURSUIT VEHICLE: 5326
PURSUIT DRIVER: YES
CATEGORY: A
AREA: QUARRY ST - EAST ST HOLLAND ST

HIT POLE IN ANHELY HOLLAND ST E. FACO

SST REQUIRED: NO

OFFENDER'S VEHICLE: 731 924 NLG AB: CONRY, AVENUE 21 MARVEL AVE
ROAD CONDITIONS: 1 OFFENDER

TRAFFIC: LIGHT MEDIUM HEAVY
WEATHER: FINE WET BAD
SURFACE: GOOD BITUMEN GRAVEL

VEHICLE ASSISTING:
CAT. B
CAT. C CABO 5362

DUTY OFFICER: Imp

TIME ABORTED: N/A HRS
REASONS:

RESULT: See report:

TRAFFIC ACCIDENT: YES NO
INJURED: YES NO
INVOLVED: POLICE OFFENDER OTHER
LOCATION: HOLLAND & AMHERST STS, BURLINGTON

INQUIRY OFFICER: Shane Kemp & 5326 (Burlwood)
lost sight of S.O. on Holland 40.

[Handwritten text appears to be discussing a mechanical or engineering context, possibly involving a test or inspection of equipment, possibly related to a cylinder and a countermeasure head. The text is not completely legible due to handwriting style and some smudging.]
COMMISSIONER'S RETURN FOLIO NO

HIGH SPEED PURSUIT

DAY: Saturday TIME COMMENCED: 1733 HOURS DATE: 26.5.90
TIME COMPLETED: 1736 TOTAL TIME OF PURSUIT: 3 minutes
HOURS

POLICE DRIVER (1) NAME: WILSON SGT/PC NO: 7746 PURSUIT DRIVER: YES/NO
PASSENGER'S NAME: SMART SGT/PC NO: 7217

POLICE VEHICLE CALL SIGN S326 REG.NO. 8AN074 BLUE LIGHTS USED YES/NO
SIREN USED: YES/NO PURSUIT CATEGORY XA 'B' 'XX
PURSUIT TERMINATED: YES/NO BY WHOM: P.C WILSON
REASON TERMINATED: Lost sight of offender

1) ANY DAMAGE TO POLICE VEHICLE: YES/NO PRESENTLY LOCATED:

POLICE DRIVER (2) NAME: SGT/PC NO: PURSUIT DRIVER: YES/NO
PASSENGER'S NAME: SGT/PC NO:

POLICE DRIVER (3) NAME: SGT/PC NO: PURSUIT DRIVER: YES/NO
PASSENGER'S NAME: SGT/PC NO:

POLICE DRIVER (4) NAME: SGT/PC NO: PURSUIT DRIVER: YES/NO
PASSENGER'S NAME: SGT/PC NO:

STOLEN: YES/NO P122, P123 SUBMITTED: YES/NO SERIAL: 90/06912
WHERE STOLEN FROM: Fremantle PRESENTLY LOCATED: East Ftlle Crash Yrc
OWNER ADVISED: YES/NO OWNER'S NAME/ADDRESS: CORRIE, ANTONIO FERNANDES

21 Marvell Ave, Spearwood TEL:

OFFENDER/DRIVER: Jason Frank Walley AGE: 16 RACE: ABO M/F
CHARGES:
(1) U.U.M.V. & 4) FAIL TO STOP.
(2) STEALING & 5) NO M.D.L.
(3) RECKLESS DRIVING

PASSENGER'S NAME: (1) Nil AGE: M/F
(2) AGE: M/F
(3) AGE: M/F

CHARGES:
(1) 
(2) 
(3) 

WAS ACCIDENT INVOLVED IN PURSUIT: YES/NO
IF INJURIES INVOLVED AND TO WHOM: YES/NO
DID A COMMISSIONED OFFICER ATTEND: YES/NO

SERGEANT ATTENDING: NAME: N/K.
DETAILS OF PURSUIT INCLUDING ANY ACCIDENT:

Police observed Stolen Vehicle 7IL974 and another vehicle in Point Street Fremantle travelling in an Easterly direction. Vehicle 7IL974 contravened stop sign at Parry Street (aprox 30kph). Police attempted to stop vehicle with lights and siren. Vehicle slowed down and then attempted to ram Police vehicle. Vehicle accelerated heavily, and then went through stop sign at Ord Street (aprox 40-50kph). Vehicle travelled up Ellen Street and went through stop sign at East Street (aprox 100-110kph). Police lost sig of vehicle in Holland Street, pursuit terminated. Police located vehicle 1 minute later on corner of Holland & Amhurst Streets in East Fremantle. Vehicle had been involved in collision with a stationery vehicle and an S.E.C. pole. Offender arrested. Traffic Sergeant and Commissioned Officer attended. Offender conveyed to Fremantle hospital for treatment to injurie received in accident. No other casualties.

HIGHEST SPEED REACHED: 100 KM/H TRAFFIC CONDITIONS: Moderate
WEATHER: Clear, good visibility.

SIGNED: 7IL974 PC 7746 PRINT NAME: WILSON

BRENTWOOD STATION DATE: 28-5-90
CHECKED BY SERGEANT: TIME: DATE:

INSTRUCTION: RELIEF SUPERVISOR TO SEE THAT THESE FORMS ARE COMPLETED AND DISTRIBUTED AS INDICATED BELOW AND ENTRY MADE IN COMMISSIONER'S RETURN AS FOLLOWS: "PURSUIT FOLIO NO./ TIME COMMENCED___HOURS, COMPLETED ___HOURS, CONSTABLE SMITH DRIVER." FORM THEN TO BE PLACED IN LOOSE LEAF BOOK.

DISTRIBUTION: (1) COMMISSIONER'S RETURN
(2) PATROL MANAGERS
(3) PURSUIT FILE (PATROL OFFICE)
(4) POLICE ACCIDENTS
APPENDIX B: STRUCTURE OF PURSUIT DATA BASE

OVERVIEW:

Pursuit Number .......... ___
Date of Pursuit .......... ___ (YY/MM/DD)
Day of Week ............... ___
Start Time ............... ___ (HH:MM:SS in 24 hr format)
Finish Time ............... ___ (HH:MM:SS in 24 hr format)
Duration ................. ___ (In Minutes)
Traffic ................... (1=Light 2=Medium 3=Heavy)
Weather ................... (1=Fine 2=Wet 3=Bad)
Road Surface Condition .. (1=Good 2=Bad)
Road Surface Type ........ (1=Bitumen 2=Gravel)
Pursuit Category .......... (A, B or C)
Offender Apprehended .... (See Supplementary Sheet)
Pursuit Outcome .......... (See Supplementary Sheet)
Reason for Initiation ... (See Supplementary Sheet)
Duty Officer Code ........... (See Supplementary Sheet)
Damage Level ............... (Ross's 5 point scale)

Did General Duties drop out if pursuit vehicle took over ............... (1=Yes 2=No 0=Not applicable)

Did Other Motorists have to take evasive action to avoid collision .......

DRIVER AND VEHICLE DETAILS:

Driver PC Number ........ ___
Driver's Name ............. ______________ (Surname)
Rank ....................... (From Personnel)
Sex ....................... (1=Male 2=Female - From Personnel)
Age ..................  (From Personnel)

Pursuit Driver ? ......  (1=Yes  2=No  0=Unknown)

Vehicle Type ..........  (S, D, M, T, O, X or C)

Police Station ......  (of Driver)

Blue Lights Used ? ......  (1=Yes  2=No  0=Unknown)

Siren Used ? ..........  (1=Yes  2=No  0=Unknown)

Damage to Police Veh..  (From Traffic Branch)

PASSenger in police pursuit vehicle:

Passenger PC Number .....  

Passenger's Name ..........  (Surname)

Rank ..................  (See Supplementary Sheet)

Sex ..................  (From Personnel)

Age ..................  (From Personnel)

Vehicle driven by Offender:

Registration Number .....  

Body Type ................  (See Supplementary Sheet)

Horse Power ................  (From MVL Records)

Year of Manufacture.....  (From MVL Records)

Vehicle Make ............  (From MVL Records)

Vehicle Model ...........  (From MVL Records)

Stolen ? ...............  (1=Yes  2=No  0=Unknown)

If Stolen, Where From .....  (Suburb)

Max Speed of Vehicle .....  

Offender Vehicle Damaged ..  (1=Yes  2=No  0=Unknown)

Offender Possessed Weapon .  (1=Yes  2=No  0=Unknown)

Offender attempted to injure police or damage police vehicle ..........  (1=Yes  2=No  0=Unknown)

Did offender provoke police ...............  (1=Yes  2=No  0=Unknown)
### Police Assisting in Pursuits

<table>
<thead>
<tr>
<th>Pursuit Number:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Call Sign Type:</td>
<td>(Alpha part of call sign eg S for S234)</td>
</tr>
<tr>
<td>Call Sign:</td>
<td>(Numeric part of call sign eg 234)</td>
</tr>
<tr>
<td>Pursuit Category:</td>
<td>(Class of pursuit i.e. A B or C)</td>
</tr>
</tbody>
</table>

### Injuries Sustained in Police Pursuits

<table>
<thead>
<tr>
<th>Pursuit Number:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Injured Number:</td>
<td>(Injury number for pursuit)</td>
</tr>
<tr>
<td>Category:</td>
<td>(1=Police  2=Offender  3=3rd Party)</td>
</tr>
<tr>
<td>Severity of Injury</td>
<td>(1=Killed  4=Hospitalised  2=Medical Attn.  5=No Medical Attn.  These codes are from the P72 form)</td>
</tr>
</tbody>
</table>

### Offenders in Police Pursuits

<table>
<thead>
<tr>
<th>Pursuit Number:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Offender Number:</td>
<td>(Number of offender in pursuit)</td>
</tr>
<tr>
<td>Category of Offender:</td>
<td>(1=Driver  2=Passenger)</td>
</tr>
<tr>
<td>Race of Offender:</td>
<td>(1=Aboriginal  2=Caucasian)</td>
</tr>
<tr>
<td>Sex of Offender:</td>
<td>(1=Male  2=Female)</td>
</tr>
<tr>
<td>Age of Offender:</td>
<td></td>
</tr>
</tbody>
</table>
Pursuit Number ... __

Offender Number .. _ (Sequential number for each offender)

Offence ............ _ (See supplementary codes list)