SAFE SOCIETY SAFE MOBILITY

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ABSTRACT

There is a tendency to think of road or transport safety as being a separate subject from safety and security, yet the two are closely interwoven. The paper will make some of these connections, referring to local and where relevant international studies. Much of what makes our roads unsafe has it's roots in criminal activity - and criminal activity has a major impact on our mobility. The need for mobility also makes us much more vulnerable than we would be if we could stay in one place. The paper will demonstrate.

Any strategy for a safe South Africa must therefore address these issues in an integrated way, bringing together experts and experiences from a range of disciplines. The first and most obvious cross-cutting theme is that of substance abuse and in particular, alcohol abuse. Alcohol is possibly the single most destructive influence in our society today; as National Injury Mortality Surveillance System (NIMSS) and South African Police Service (SAPS) data clearly shows, it makes us both vulnerable to attack and accidental harm or death as well as contributing to extreme and violent criminal behaviour. The combination of alcohol and guns is often lethal - and in a society characterised by frustration and anger, we all too often see the results on our roads in incidents of road rage. This also feeds into our fear of crime and perceptions of unsafety - in return contributing to more guns, more frustration, and more anger. The presence of guns in cars and on people on public transport significantly impacts our safety as we move from place to place. Public transport is inherently unsafe for many of our citizens. Women are vulnerable to sexual assault on their way to and from work. Children are similarly vulnerable on their way to and from school. Our roads provide a showcase for our lack of respect for the rule of law in South Africa and the way in which this feeds into our sense of chaos and anxiety about safety. Many vehicles are unroadworthy, many drivers have obtained their licenses through illegal means, and bribery of traffic and other law officials is ubiquitous. All of these are criminal acts, yet somehow it seems that the majority of South Africans have found ways to excuse their own illegal behaviour and shift the blame onto others. Vehicle theft, in particular hijacking makes our roads a place of fear and anxiety for many, particularly women. There is a range of things that we need to do about all of this and the paper will propose a few, citing studies and cases:

We need to clarify and reinstate respect for the rule of law as a basic premise of a democracy. We need to categorise and deal with crime as crime, regardless of where it occurs. The law must be seen to deal with offenders equitably, regardless of social status. This must apply to both laws and bylaws. We need to address the scourge of alcohol and its place in our society. It is somehow the protected errant son, too much loved to be outlawed; across the strata of SA society, drunkenness is tolerated and even expected, it is a part of celebration, grief, congratulation, entertainment, enjoyment of sport, dealing with disappointment or tiredness. We live with the very expensive consequences. We need to reduce the availability and efficacy of firearms in the illegal market. Under current circumstances the right to carry a gun puts us all at risk. We must ensure that the officials entrusted to uphold the law do so and we must deal ruthlessly with those who do not. We must dramatically reduce our tolerance for offenders - we can no longer afford to tolerate criminal activity of any kind in our family members, friends, colleagues and acquaintances. It must be anti-social to admit to breaking the law, not to respond negatively to one who admits to having done so. We need to change the way we capture information and manage knowledge about these issues so that they are scientifically and quickly demonstrable and responses can be appropriately motivated.

1. SAFE MOBILITY AND A SAFE SOUTH AFRICA

There tends to be a separation of safety as it applies to road or transport and safety as it applies to security, yet the two are closely interwoven. The difference between safe and unsafe mobility underpins the difference between a productive, sustainable and prosperous society and one that struggles to maximise its potential. For many cities, crime prevention is thus seen as an economic issue, with considerable emphasis on safety of commercial areas, transport hubs and routes, as well as on personal safety. In Johannesburg for instance, a survey of the business community revealed that 70% regarded crime as a major obstacle to growth, while 62% considered it to constrain investment in the city. It was reported that reduction of crime would be the most useful contribution to the economy (Johannesburg City Council, 2003/2004). Unsafety on our roads and transport systems presents obstacles to all sectors of our community, adding to the vulnerability of those already designated as vulnerable and often constraining their movement and subsequent participation in the opportunities presented by our developing nation.

This plays out in a variety of ways. The needs of children for protection as they go to and from school may be more obvious – and at least in theory easier to address, than for instance the needs of women on their way to and from work or to access services. The disabled come with yet another set of challenges, exacerbated by their inability to protect themselves from attack. Poor people are in South Africa more likely to make use of mass and public transport, and for the elderly poor this is particularly problematic in terms of risks of victimisation. Where the system does not provide protection, individuals must rely on their own ability to protect themselves and

vulnerability is therefore often a consequence of disadvantage (Holtmann & Eloff, 2004).

Unsafe public transport and the risks that accompany transport of all kinds, particularly at night, also influence the way that a society socialises and interacts. Young middle class people in South Africa for instance are often dependent on parents for mobility where in most developed countries, public transport is a rational and safe choice as young people meet and entertain themselves. This has an impact on the development of social networks and on the need for young people to safely explore independence and making choices as they emerge from childhood (Mijanovich, & Weitzman, 2003).

It is difficult to asses the full impact of unsafety on behaviour. A survey of Johannesburg residents in 2003 posed questions about the way in which perceptions of unsafety restricted mobility and responses clearly indicated that for instance people are more likely to be voluntarily mobile in daylight than at night. This is reflected in anecdotal evidence about poor support for theatre and musical events in that City. Johannesburg has however a thriving pavement café society in many suburbs and there is considerable activity in the townships at night. We can extrapolate that if it were deemed safe to move around at night, even greater potential for growth would be unleashed (Council for Scientific and Industrial Research, 2003b).

With more than 500,000 traffic accidents annually at a cost of nearly 10,000 lives and thousands of injuries, our road safety record leaves much to be desired (Global issues gateway, 2004). NIMSS data (MRC & UNISA, 2004) reports that children in SA are on average six time more at risk of "succumbing to non-natural death" than in the USA, with women five times more at risk and men eight times more at risk. The leading causes of non-natural death are violence and transport.

This paper aims to make some of these connections between transport and road safety on one hand, and safety and security on the other, referring to local and where relevant international studies and identifying the risk factors associated with road and transport safety from a crime prevention perspective.

Crime occurs where there is a convergence of the will to offend, a vulnerable victim and an environment that provides the opportunity for the offence (Council for Scientific and Industrial Research, 2006a). See figure 1 below, which demonstrates this convergence and points therefore to the multi-disciplinary nature of crime.

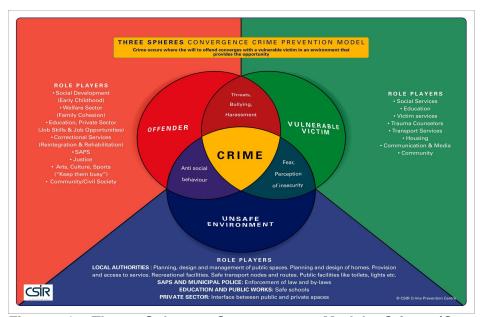


Figure 1: Three Spheres Convergence Model: Crime (Council for Scientific and Industrial Research, 2006a)

Figure 2, below, demonstrates the transformation of the convergence from crime to peace and safety, through the transformation of all three spheres; from a pool of offenders there is transformation to constructive and contributing citizens. From vulnerable victims there is transformation to resilient and well-supported communities and from an unsafe environment there is transformation to a well designed and managed environment.

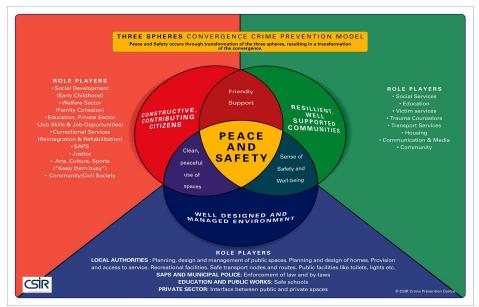


Figure 2: Three Sphere Convergence Model: Peace and Safety (Council for Scientific and Industrial research, 2006a)

Issues of transport safety fall mainly into the third of the demonstrated spheres, the physical environment (Council for Scientific and Industrial

research, 2006a). Yet it is clear that in only transforming the environment, we will not achieve safety as the will to offend and the innate vulnerability of victims remains. This is demonstrated in for instance the way in which target hardening of motor cars in South Africa the 1990's resulted in an increase in car hijackings rather than a reduction in car related crimes. We see it also today in the way in which target-hardening of up-market homes increases the level of force used to penetrate defences, with increasing violence associated with household burglaries and robberies.

Focusing entirely on changing the physical environment or situation in which crime occurs can only either displace crime to a different place, or displace a particular kind of crime to be replaced by another, often more sophisticated crime.

The need for mobility exposes most citizens to a range of environments during the course of any given day. Children travel to and from school; men and women to and from work. Families travel for recreational purposes; tourists of one kind and another travel for a range of reasons. All make themselves vulnerable during the course of travel – and the way that public transport is designed and managed impacts this vulnerability in a variety of ways. Crime prevention and safety strategies address the relationship between the environment and crime in both preventative and reactive ways (Council for Scientific and Industrial Research, 2006b & 2006c).

In the poorest communities, daily life is characterised by a lack of services, where for instance women often have to walk great distances – to seek or attend work, for potable water. They must, in the absence of electricity, collect wood for heating and cooking. Young girls often walk a long way to attend school, placing them at considerable risk. In UMhlathuze for instance (CSIR and Universal Security Services, 2003), girls who were detained at school for punishment reasons, who then had to walk home alone, reported assaults along the way. In Driefontein (Council for Scientific and Industrial Research, 2002), a study into child abuse commissioned by the SAPS demonstrated that children who had to walk through an area where there were tall reeds were similarly assaulted on their way home. Thus it is that lack of transport that adds to the vulnerability of the poor.

In those communities where transport infrastructures do exist, unsafe conditions of transport add to an unsafe society. Such conditions are sometimes as a result of poor infrastructure or the inherently unsafe nature of much of our public transport and are in other circumstances a result of a culture of lawlessness that pervades the users of our roads and transport infrastructure.

National Injury Mortality Surveillance System (NIMMS) is a system that produces information on non-natural deaths in six provinces. They are part of the South African Health Information Network. The NIMSS produces and disseminates descriptive epidemiological information for deaths due to non-natural causes that, in terms of existing legislation, are subject to medico-legal

investigation (MRC & UNISA, 2004). Their data clearly illustrates the unsafe conditions of transport.

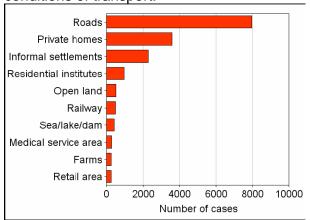


Figure 3: Top 10 scenes of injury (MRC & UNISA, 2004)

Figure 3 shows that roads are noticeable the scene with the highest number of injuries. Approximately 85% of traffic fatalities in South Africa can be attributed to transgressions of the law (Road Safety and Arrive Alive, 2007). NIMMS data also indicated that in 52% of road accident mortalities relate to alcohol. This means that from the 8000 cases of road injuries, 85% of them relate to criminal behaviour while a substantial number of those accidents involved drunk driving.

Effective traffic enforcement is one of the key elements of achieving greater road safety.

1.1 Crime prevention and road safety

Crime prevention theory is based on the inclusion of role players outside of the criminal justice system (CJS) who understand the connection between their core business and the impact of that function on the environment or on vulnerability of victims. According to (Lab, 2004) "..crime prevention entails any action designed to reduce the actual level of crime and/or the perceived fear of crime". The National Crime Prevention Strategy (NCPS) of 1996 and the White Paper on safety and security (1998) give considerable attention to environmental or situational crime prevention. The White Paper's "strategic focus areas" identify two broad approaches to crime prevention, namely law enforcement and social crime prevention under which environmental design and management is considered (Department of Safety and Security, 1998). The best and most simple example of this remains perhaps to say that when the man who changes the light bulbs in a public space (for example at transport modal interchanges) realises that changing it today and not tomorrow is a crime prevention action, victimisation is reduced (Council for Scientific and Industrial Research, 2002).

In terms of transportation, crime prevention and safety principles should guide the planning of corridors and nodes, the design of taxi ranks, inter modal transport interchanges and other transport facilities. The relationships between open space/vacant land and criminal activities need to be taken into account and mitigated (Council for Scientific and Industrial Research, 2006). It is important to study and understand migration routes and routes that are regularly and irregularly used, to best respond to needs and demands that change according to the time of day that they are used or other variables that will affect our responses.

1.2 Crime prevention and public transport

In Johannesburg (and elsewhere) public transport hubs, for instance modal interchanges as well as public transport mechanisms themselves, present massive challenges for the safety of commuters). Millions of South African commuters rely on a public transport system that is less than reliable and that offers little protection from crime and violence. Long delays, muggings and assaults are but some of the risks faced by commuters on a daily basis.

Different transport modes present different risk factors, despite many similarities:

- Trains: Access to train stations often provides opportunity for crime.
 Commuters are at risk anywhere where there are either too few people to provide protection or too many, in which case thieves and muggers are difficult to observe or catch.
- Buses: overloading, lack of compliance with roadworthy laws and violation of driving regulations present real threats to the safety of commuters.
- Taxis: Taxi violence has long beset the South African commuter, creating extreme vulnerability for millions of people as taxi wars are fought at taxi ranks and on routes.
- Airports: tourists and business travellers are vulnerable to mugging and theft. Tourists are regarded as particularly vulnerable because they tend to be distracted and less vigilant about potential risks.

Further risks are created by road and transport infrastructure (such as planning and design), management of facilities such as toilets at modal interchanges that are unsafe or where there are no toilets at all. This risk is demonstrably greater for women than for men, for whom alternatives are more easily found.

South Africa is considered to be one of the world's most preferred destinations for international tourism, recently reported to be among the top five nations, with revenue of over R 42billion in 2005/2006. Crime as a whole is a threat to tourism - unsafe public transport and roads are visible obstacles to achieving sustainable growth potential in tourism, particularly in the approach to hosting the 2010 FIFA World Cup (Tourism Business Council of South Africa, 2007).

1.3 The impact of corruption on road and transport safety

Corruption further increases risk of unsafety on both our roads and transport systems. On a grand scale, money intended for maintenance of roads or service provision and the upgrading or provision of facilities is diverted for private gain. On an immediate level, unqualified drivers and unroadworthy vehicles are granted licenses. It has also become shockingly common for drivers to regard bribery of a traffic official as a reasonable alternative to either driving without violation of the laws or paying if caught breaking the law. A recent "phone in" programme on a local radio station had people calling in and presenting a wide range of justifications for such behaviour. Reality is that as long as there is no respect for the rule of the laws of the road, the road will be an unsafe place. In defining police corruption, Miller specifies that it involves the direct abuse of power/position. It entails a police official doing, or not doing, something for some sort of gain. Levels of corruption both by the public and law enforcement officers indicate low levels of respect for the law.

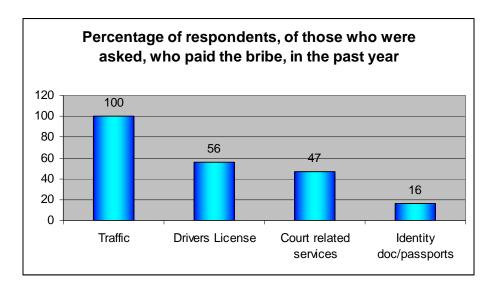


Figure 4: Percentage of bribes paid (Van Vuuren, 2004)

1.4 The role of enforcement

Levels of enforcement are inadequate. According to the National Road Safety Strategy (NRSS) (DoT, 2006) there are too few traffic officers, metro police, and there is inadequate law enforcement equipment. Significantly, there is a lack of visible law enforcement by officers.

Criminal behaviour – often not recognised as such, but seen rather as antisocial behaviour, is also a risk factor, for instance reckless and negligent driving, driving under the influence of alcohol, speeding and overloading. Much of what makes our roads unsafe thus has its roots in criminal activity - and criminal activity has a major impact on our mobility. The need for mobility also makes us much more vulnerable than we would be if we could stay in one place. We need to see transport safety in an integrated way, bringing together experts, experiences and solutions from a range of disciplines. This is often the most difficult challenge in terms of crime prevention and safety interventions, where role players outside of the CJS struggle to understand their potential contribution to safety (Friedman, 1998). The media plays an important role in our responses to crime and in the sensationalising of some crimes over others (Lab, 2004). According to Emmett and Butchart (2000) the normalisation by the media of criminal behaviour as part of daily lives

contributes to general unease and sense of insecurity. Maxfield (1984) emphasise this argument and is of opinion that such reporting on crimes feeds the general fear of crime, which increases the perceptions of vulnerability and leads to a general sense of being overwhelmed by crime.

2. ALCOHOL, CRIME, AND SAFE MOBILITY

A very obvious cross-cutting theme is that of substance abuse and in particular, alcohol abuse. Alcohol is possibly the single most destructive influence in our society today, as NIMSS and SAPS data clearly shows, it makes us both vulnerable to accidental harm or death as well as contributing to extreme and violent criminal behaviour.

Drunk driving is a crime and is one of the biggest threats to road safety in South Africa. According to the third annual report of the National Injury Mortality Surveillance System (NIMSS) (Van As, 2004), 52% of patients dying in road and/or transport related incidents, had elevated blood alcohol content.



Figure 5: Percentage of traffic related deaths by alcohol level (Van As, 2004)

In South Africa we tend to see alcohol abuse as being a problem related mostly to poverty, yet a series of high profile incidents involving high profile people in positions of leadership and power over the past year should perhaps be seen as the tip of a different iceberg (News 24, 2007 & IOL South Africa, 2007b).

3. GUNS, CRIME, AND SAFE MOBILITY

The combination of alcohol and guns is lethal - and in a society characterised by frustration and anger, we all too often see the results on our roads in incidents of road rage. This also feeds into our fear of crime and perceptions of unsafety - in return contributing to more guns, more frustration, and more anger.

A worrying number of people have reported being shot in road rage incidents. A study by the Medical Research Council (Altenroxel, 2003) showed that 57 of 1 006 drivers interviewed said they had been shot at or had a gun pointed at them. Only three of them admitted to perpetrating similar acts. Recent self-reported data collected from South African motorists reported that. "About

one-tenth of the motorists acknowledged driving under the influence of alcohol and most drove above the legal limit (legal blood /alcohol limit is set at 0.05g/100ml)" (Global Issues Gateway, 2004). In addition, about half of these motorists reported that they were aggressive when they had consumed alcohol. What is disturbing is that one-tenth of the motorists reported that they "carried a weapon while driving and that a firearm was most frequent weapon of choice".

Vehicle theft, in particular hi-jacking makes our roads a place of fear and anxiety for many, particularly women. This crime is also closely linked to the availability of guns. It has become increasingly difficult to steal motor vehicles, as a result of anti-theft devices, such as immobilisers, gear-locks, etc. These steps have resulted in a dramatic increase in vehicle hijackings (Arrive Alive, 2006). The large number of stolen and unlicensed firearms is a matter of great concern with respect to motor vehicle hijacking.

4. GENDER AND SAFE MOBILITY

Transportation is a necessity for survival and well-being and can be the key to accessing jobs, healthcare, food, education and recreation (The Woman's Foundation of California, 2006). Transportation however holds a threat for woman and girls. For example, it has an impact on women with children who do not have access to a car or reliable public transportation in terms of getting to work, having access to healthcare and childcare. Lack of access to adequate transportation for older woman has an impact on access to medical care, food and social activities.

Women are the most frequent consumers of public transportation (The Woman's foundation of California, 2006). They utilise transportation in different ways than men. Woman travel consistently to meet basic family needs such as shuttling children and seniors to medical care centers, shopping and groceries, school and community programmes and to and from their employment environments. Many service sector jobs in low-density areas are not located near bus routes, so more time and more transfers are required to arrive on time.

As woman work more "non-traditional" hours, security is a rising concern (The Woman's foundation of California, 2006). Waiting areas for public transport are often not properly lit or are located close to busy traffic and thus unsafe for children. Sexual harassment and the threat of sexual violence are constraints facing woman, especially at night. (Tiwari, G. 2004)

In both rural and urban areas in South Africa, keeping children safe on the way to and from school is an ongoing problem (Centre for Justice and Crime Prevention, date unknown). An astoundingly simple and clever solution is the Walking School Bus pioneered by Land Transport New Zealand, whereby the principles of bus transport are duplicated in a supervised walking programme. Children are picked up en-route and walked to school and the process is reversed at the end of the school day (Land Transport New Zealand, 2007).

5. DEVELOPMENT AND TRANSPORT SAFETY

Infrastructure capital has a significant, positive effect on economic output and growth (Kessides, 1995). Infrastructure contributes to economic development both through increasing productivity and by providing services which enhance the quality of life. The safety of society is thus influenced by the safety of its transport system, an essential component of infrastructure. Transport plays a significant role in that it provides access to education, trade and industry. In the State of the Nation address (09 February 2007) President Mbeki further emphasize the importance of transport for social development. In identifying the Bus Rapid Transit System as an outcome of the programme for the social sector for 2007 (Pres. Mbeki, 2007), the President introduced an example of public transport that incorporates public safety principles. Bus Rapid Transit (BRT) is a surface-based, flexible rapid transit system adopted by a diverse cross-section of cities worldwide - Curitiba, Brazil is one of the most famous examples (Wikipedia, 2007). Safety and convenience are combined in a system that has dedicated, exclusive bus routes with physical barriers to separate them from roads being used by other modes of transport; platforms at bus floor levels for rapid boarding and exiting; traffic signal linkages and priority; information technology links between vehicles and passenger information displays; and pre-entry ticketing that allows BRT systems to operate at the pace and volumes of underground metro systems or fixed rail services. The system operates at significantly less cost than alternatives yet with high visibility and safety of commuters. BRT systems offer a practical solution for our cities which face historical lack of transport infrastructure and where safety and congestion are major issues.

Safety and security are major attributes of transit systems. BRT systems, when properly planned, implemented, and operated can:

- Reduce accident rates
- Improve public perception of safety and security
- Improve risk management leading to reduced insurance claims, legal fees and investigations
- Reduce maintenance costs associated with damage and vandalism (Office of Research, Demonstration and Innovation, 2004).

6. CONCLUSION

In making the links between what are generally seen as separate disciplines, there are thus many reasons to integrate approaches to road and transport safety and safety as it refers to protection against crime and violence. Safe roads and safe public transport will contribute significantly to a safe society and safety should therefore be integral to planning, design and management of transport systems and developments.

We need however to clarify and reinstate respect for the rule of law as a basic premise of a democracy. We need to categorise and deal with crime as crime, regardless of where it occurs. The law must be seen to deal with offenders equitably, regardless of social status. This must apply to both laws and bylaws.

We need to address the scourge of alcohol and its place in our society. It is somehow the protected errant son, too much loved to be outlawed; across the strata of SA society, drunkenness is tolerated and even expected, it is a part of celebration, grief, congratulation, entertainment, enjoyment of sport, dealing with disappointment or tiredness. We live with the very expensive consequences. We need to reduce the availability and efficacy of firearms in the illegal market. Under current circumstances the right to carry a gun puts us all at risk.

We must ensure that the officials entrusted to uphold the law do so and we must deal ruthlessly with those who do not. Along with this, we must dramatically reduce our tolerance for offenders - we can no longer afford to tolerate criminal activity of any kind in our family members, friends, colleagues and acquaintances. It must be anti-social to admit to breaking the law, not to respond negatively to one who admits to having done so.

We need to change the way we capture information and manage knowledge about these issues so that they are scientifically and quickly demonstrable and responses can be appropriately motivated. As long as the majority of our citizens put themselves at unreasonable risk through their need for mobility, no strategy for a safe and prosperous South Africa can succeed. Safe transport and mobility is central and essential in a safe South Africa.

LIST OF REFERENCES

Altenroxel, L. 2003. Road rage in South Africa is worrying, study finds. [O]. Available:

http://www.thestar.co.za/index.php?fSectionId=128&fArticleId=212147 Accessed on 28/03/2007

Arrive Alive, 2006. *Hijack prevention guidelines*. [O]. Available: http://www.arrivealive.co.za/pages.asp?mc=hijack&nc=HijackPrevention Accessed on 28/03/2007

Centre for Justice and Crime Prevention, date unknown. *Public hearing on school-based violence*. [O]. Available:

http://www.cjcp.org.za/sahrc_public_hearing_school_violence.pdf Accessed on 27/03/2007

Council for Scientific and Industrial Research. 2002. Crime Prevention Centre (CPC). Sexual Victimisation of Young Girls in the Driefontein Area. Pretoria: CSIR

Council for Scientific and Industrial Research. 2003a. Crime Prevention Centre (CPC). An Explorative Study into the Incidence of Social Fabric Crime (SFC) in Limpopo and Strategy to Combat Social Fabric Crime. Pretoria.

Council for Scientific and Industrial Research. 2003b. Crime Prevention Centre (CPC). Johannesburg: Victim survey and crime analysis. Pretoria: CSIR

Council for Scientific and Industrial Research. 2006a. CSIR DPSS Local Crime Prevention Toolkit: Victimisation reduction. Pretoria: CSIR

Council for Scientific and Industrial Research. 2006b. *Gauteng Provincial safety plan*. Pretoria: CSIR

Council for Scientific and Industrial Research, 2006c. *Central Karoo Local Crime Prevention Strategy*. Pretoria: CSIR

CSIR and Universal Security Services, 2003. Community based crime prevention. South Africa.

Department of Safety and Security. 1998. White paper on Safety and Security: "In service of safety" (1999-2004). Johannesburg: Author.

Department of Transport South Africa, 2006. *National road safety strategy, 2006 onwards*. [O]. Available: http://www.transport.gov.za/road_safety_strategy.pdf
Accessed on 07/05/2007

Emmett, T. and Butchart, A. 2000. *Behind the mask: Getting to grips with crime and violence in South Africa*. Human Science Research Council: Paarl Printing.

Friedman, M., Camerer, L. (Ed.) and Kotze, S. (Ed.). 1998. *Special report on victim empowerment in South Africa. Victim empowerment programme (VEP)*. South Africa: Institute for Security Studies.

Global issues gateway, Global dispach, 2004. Road Rage in South Africa: The problem, psychological factors and possible solutions. [O]. Available:

http://www.gig.org/Features/gig GD Letter 9.php

Gounden, F. 2007. *Cops warn of new smash 'n grab tactics*. [O]. Available: http://www.onlineseries.co.za/crime.php#2435102826675880647 Accessed on 29/03/2007

Holtmann, B. and Eloff, M. 2005. Victimisation Reduction. In R. Snyman (ed.) and L. Davies (Ed.) 2005. *Victimology in South Africa*. South Africa

IOL South Africa, 2007. I was not drunk! [O]. Available: http://www.iol.co.za/index.php?set_id=13&art_id=iol1169641954199l253
Accessed on 08/06/2007

Johannesburg City Council. 2002. *Joburg 2030*. Johannesburg: City of Johannesburg.

Kessides, C. 1995. The contribution of infrastructure to economic

development: A review of experience and policy implications. [O]. Available: http://www.wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/1993/09/01/000009265_3970311122307/Rendered/PDF/multi0page.pdf
Accessed on 28/05/2007

Lab, S.P. 2004. *Crime prevention: Approaches, practices and evaluation.* 5th Ed. Bowling Green State University: Anderson Publishing.

Land Transport New Zealand, 2007. Walking school bus coordinator's guide. [O]. Available:

http://www.ltsa.govt.nz/sustainable-transport/guidelines/walking-school-bus.pdf Accessed on 29/03/2007

Maxfield, M. 1984. The limits of vulnerability in explaining fear of crime: A comparative neighbourhood analysis. *Journal of research in crime and delinquency*, 21, 233-50.

Metropolitan Transportation Authority, 2007. What is Bus Rapid Transit? [O]. Available: http://www.mta.info/mta/planning/brt/whatis.htm Accessed on 28/05/2007

Mijanovich, T., and Weitzman, B.C., 2003. Which broken windows matter? School, neighbourhood, and family characteristics associated with youth's feelings of unsafety. *Journal of Urban Health*, 80, (3), 400-415.

Miller, J. 2003. *Police Corruption in England and Wales: An assessment of current evidence*. Home Office Report 11/2003. London

MRC South Africa, & UNISA, 2004. *A profile of fatal injuries in South Africa:* 6th Annual Report of the National Injury Mortality Surveillance System 2004. [O]. Available:

http://www.sahealthinfo.org/violence/nimss.htm

Accessed on 30/03/2007

News 24. 2007. Drunk judge gets trial date. [O]. Available:

http://www.news24.com/News24/South_Africa/News/0,,2-7-

1442 2115321,00.html

Accessed on 08/06/2007

Office of Research, Demonstration and Innovation, 2004. *Characteristics of bus rapid transit for decision making.* [O]. Available: http://www.gobrt.org/

Accessed on 25/05/2007

Pres. Mbeki, 2007. State of the Nations Address of the President of SouthAfrica, Thabo Mbeki: Joint Sitting of Parliamnet. [O]. Available: http://www.info.gov.za/speeches/2007/07020911001001.htm
Accessed on 25/05/2007

Road safety, & Arrive Alive, 2007. Reporting bad drivers for the sake of road safety. [O]. Available: http://roadsafety.wordpress.com/ Accessed on 28/03/2007

SAPS, 2006. South African Police Service Statistics. [O]. Available: http://www.saps.gov.za/statistics/reports/crimestats/2006/crime_stats.htm
Accessed on 29/03/2007

Security.co.za., 2007. *Window washers beat up motorist*. [O]. Available: http://www.security.co.za/fullStory.asp?Newsld=2581 Accessed on 29/03/2007

The woman's foundation of California, 2006. *Women in transit*. [O] Available: http://www.ydaydesigns.com/transit.pdf Accessed on 25/05/2007

Tiwari, G. 2004. *Social dimension of transport planning*. Transportation research and injury prevention programme. [O]. Available:

http://www.transport-

<u>links.org/transport_links/filearea/documentstore/322_Geetam%20Tiwari%20Paper%201.pdf</u>

Accessed on 28/05/2007

Tourism Business Council of South Africa, 2007. *One voice for tourism.* South Africa

United Nations Office on Drugs and Crime, 2005. *Crime and Development in Africa.* Vienna International Centre: Vienna

UN Millenium Development Goals website, 2007. What are the millennium development goals? [O]. Available: http://www.un.org/millenniumgoals/

Accessed on 12/06/2007

Van As, S. 2004. *The taxing issue of alcohol abuse: Establishing an alcohol injury fund.* [O]. Available: http://www.scienceinafrica.co.za/2004/january/injuryfund.htm

Accessed 28/03/2007

Van Vuuren, H. 2004. Small bribes, big challenge: Extend and nature of petty corruption in South Africa. *Crime Quarterly* No 9, 2004. [O]. Available: http://www.iss.org.za/pubs/CrimeQ/No.9/VanVuuren.htm
Accessed on 28/03/2007

Wikipedia, 2007. *Curitiba*. [O]. Available: http://en.wikipedia.org/wiki/Curitiba
Accessed on 28/03/2007