

Crime and the Physical Environment in South Africa: Contextualizing International Crime Prevention Experiences

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Crime in South Africa remains a serious challenge and there is a general feeling in the country that the situation is worsening. But attempts have been made to reduce crime through the implementation of mechanisms that respond specifically to particular contextual problems and involve, to some extent, a local interpretation of international experiences. This paper highlights a number of responses, particularly those that recognize the physical (built) environment as a factor that could enhance or reduce opportunities for crime. It commences with a brief discussion of some of the distinctive features of the South African context and a number of key challenges impacting on crime and crime reduction initiatives in the country. The next section deals with some typical responses to the crime problems in South Africa, followed by a description of an approach to crime prevention through environmental design developed in response to the local context and challenges.

Crime in South Africa remains a serious challenge. The latest crime statistics released for the year ending March 2007 did not do much to change the current sense of cynicism prevalent amongst many South Africans regarding crime. Responding to the crime statistics, political opposition parties and some sections of the media have accused government of not meeting its commitments. The general feeling is that the crime situation is worsening. Crime is indeed a matter that is constantly on the minds of most South Africans. A recent survey indicated that almost 40 per cent of the population know someone who has been a victim of crime over the past six months (Harris and Radaelli, 2007).

The reasons behind the crime problems

experienced in South Africa are often debated but are not always easy to understand. It has been suggested that the high crime levels could be related to the transition from authoritarian rule to democracy, as similar patterns appear to be evident in other transitional societies such as those which have moved from military to civilian rule in Latin America, the former communist regimes of Eastern and Central Europe as well as other countries in Africa (Shaw, 2002).

Related to this is general speculation regarding the (often perceived) differences between so-called developed and developing countries with respect to crime and its prevention. This is a debatable issue, and a number of authors have cautioned against the oversimplification of applying concepts such

as 'developed' and 'developing' to groups of countries (Arthur and Marenin, 1995; Dixon, 2006, *Explaining Crime in Developing Countries* 2007), or generalizations about crime patterns in these countries (Crime Rates and Trends in Developing Countries, 2007).

However, it may be of value to raise some questions regarding the appropriateness and applicability of crime studies conducted in 'developed' countries such as the USA, Canada, the UK and Australia to conditions experienced in countries such as South Africa. Certain aspects related to this have received some attention (Arthur and Marenin, 1995; Akpokodje *et al.*, 2002), but there are many uncertainties that would benefit from further research. The issue was also discussed at a conference on Environmental Criminology and Crime Analysis held in Chilliwack, Canada in July 2006, and it became evident that there is a need for further studies aimed at exploring the extent to which crime prevention theories, approaches and practices may have to be re-contextualized in order for them to be applicable to countries such as South Africa, Chile, India and Turkey.

In South Africa, attempts have been made to reduce crime through the implementation of mechanisms that respond specifically to particular contextual problems and involve, to some extent, a local interpretation of international experiences. This paper highlights a number of responses, particularly those that recognize the physical (built) environment as a factor that could enhance or reduce opportunities for crime. It commences with a brief discussion of some of the distinctive features of the South African context and a number of key challenges impacting on crime and crime reduction initiatives in the country. The next section deals with some typical responses to the crime problems in South Africa, followed by a description of an approach to crime prevention through environmental design developed in response to the local context and challenges.

The South African Context

Socio-spatial Context

South Africa has an estimated population of 47.9 million people (Statistics South Africa, 2007a) living in an area of just over 1.2 million square kilometres (slightly less than twice the size of Texas). South Africa faces serious challenges as a result of the high levels of poverty, as well as extreme inequalities and disparities in income, wealth and opportunity in the country (Aliber *et al.*, 2006). It is estimated that 57 per cent of the South African population lives in poverty (HSRC, 2004). According to the March 2007 Labour Force Survey, the South African unemployment rate is estimated at 25.5 per cent of the labour force (Statistics South Africa, 2007b).

Characteristics of the Urban Environment and Opportunities for Crime

Up until 1994, when the first democratic elections were held, the country's apartheid policies directly influenced planning policies and practices which, to a large degree, shaped cities and towns in South Africa. Cities were partitioned into various zones based on race. Residential areas surrounding the central business core were traditionally reserved for the white population. On the periphery of the city, removed from the white suburbs, townships were created for the migrant black labour force. Often the coloured and Indian communities were situated between the white and black areas to act as a buffer. The white communities were further separated from the townships by purposely designed buffer zones, which were either set aside for industry or left unused. Informal settlements have developed on much of the vacant land surrounding townships (figure 1).

Although considerable progress has been made since 1994, the form and structure of the apartheid city has not changed significantly during the past 13 years (figure

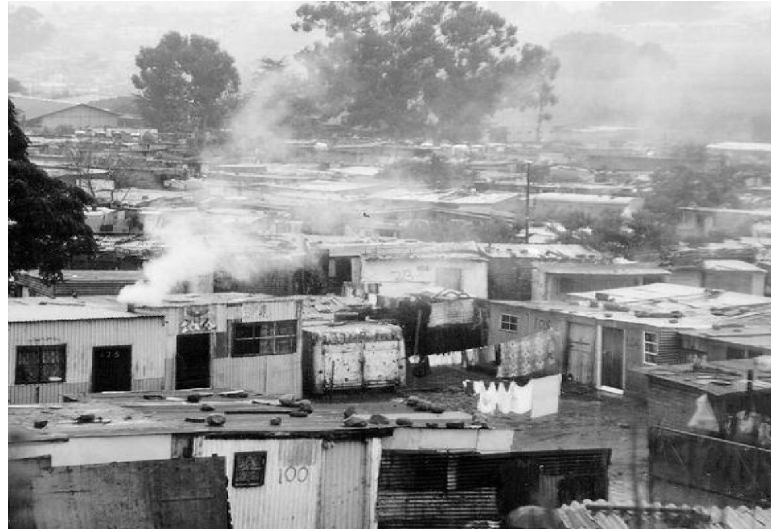


Figure 1. A typical informal settlement on the urban periphery.

2). Living conditions for the poor have in many ways not really improved. Many of the poor township areas do not have adequate infrastructure such as roads, electricity and water supply. The infrastructure that has been provided is often not maintained on a regular basis. For instance, in some townships, certain roads have deteriorated to the extent that vehicles cannot gain access to some areas, making it difficult for the police to patrol these areas or to respond to calls for assistance. These areas also suffer from a lack of recreational facilities such as community halls and sports facilities. This provides a

fertile ground for the proliferation of informal (and often illegal) taverns.

Although levels of vehicle ownership in South Africa are very low, most areas are not designed to accommodate pedestrians. Provision is often not made for pedestrian traffic in the form of, for instance, walkways, pedestrian bridges or adequate lighting, thus exposing the poor in particular to situations where they are vulnerable to victimization.

Crime in South African Cities

The early 1990s saw a dramatic increase



Figure 2. A post 1994 housing development.

in the levels of recorded crime, and this trend has continued even after the move to democracy in 1994 (Schonteich and Louw, 2001). The high levels of violent crime remain of particular concern, with crimes such as murder, rape and assault having amongst the highest incidence rates in the world (Du Plessis and Louw, 2005).

Statistics for violent crimes in South Africa are shown in table 1 (SAPS, 2006). Despite some decreases in the reported levels of certain crimes, they are still disturbingly high. For instance, although the murder rate decreased from almost 77 per 100,000 of the population in 1994/95 to just under 40 in 2005/06, it is still more than seven times the world average of 5.5 and 20 times higher than the British rate of just under two per 100,000 (Burger, 2007).

The apartheid policies of the past still contribute to disproportionate levels of crime in different communities. Studies indicate that crime patterns and trends differ substantially between, for instance, city suburbs and traditional poorer areas such as townships and informal settlements. The poor in South Africa are more exposed – not only to violence in the course of property crimes, but also to interpersonal crimes such as assault, murder and rape (Shaw and Louw, 1998). The poor are also particularly vulnerable to both the risks and the effects of victimization. They are usually unable to reduce their chances of being victimized, for example, by installing security gates and alarm systems and are

often not able to insure or to replace stolen items (Louw and Shaw, 1997).

Perceptions and Fear of Crime

According to victimization surveys, all South Africans display relatively high levels of fear of victimization. Contrary to findings in many other countries, levels of fear among both victims and non-victims are equally high (Shaw and Louw, 1998). Despite the fact that South Africa's crime rates have decreased or stabilized during the past five to seven years, the public's fear of crime has increased between 1998 and 2003 (Mistry, 2004).

A National Victims of Crime Survey conducted by the Institute for Security Studies (ISS) in 2003 indicated that housebreaking, after murder, was the crime type of which respondents were most afraid in the areas where they lived. This fear extends beyond the house to the areas where people live or work. The study revealed that 58 per cent of respondents felt very unsafe when walking alone in their areas after dark, a much higher percentage than the 25 per cent in 1998. The same study found that housebreaking was the most common crime type in South Africa, with 7.5 per cent of people over the age of 16 years having been victims of housebreaking in 2003 (Mistry, 2004).

Key Challenges

The characteristics described above present

Table 1. Crime levels in South Africa (2002–2007).

<i>Crime</i>	Period					2006/07 <i>Rate per 100,000</i>
	2002/03 <i>Total</i>	2003/04 <i>Total</i>	2004/05 <i>Total</i>	2005/06 <i>Total</i>	2006/07 <i>Total</i>	
Murder	21,553	19,824	18,793	18,545	19,202	40
Manslaughter	11,202	11,096	11,995	12,415	12,871	27
Rape	52,425	52,733	55,114	54,926	52,617	116
Robbery	228,442	229,209	217,614	194,449	197,714	413
Serious assault	266,321	260,082	249,369	226,942	21,030	455

Source: South African Police Service at <http://www.saps.gov.za>.

a range of challenges that could limit the effectiveness of certain crime prevention measures. These challenges need to be acknowledged when attempting to relate to South Africa the results of studies conducted in developed countries. Based on research carried out in South Africa pertaining to the relationship between crime and the physical (built) environment (Kruger *et al.*, 2001) these challenges can be summarized as follows:

- ♦ *The crime situation is exceptional.* In certain places, some crime reduction measures are likely to be swamped by social and other factors including extreme levels of poverty and unemployment, a propensity for violence, drug and alcohol abuse and the so-called 'moral decay' within many communities (lack of moral values, disregard for human life, greed etc.) which, combined with a criminal justice system regarded as being ineffective in many ways, result in exceptionally high levels of crime. Under such conditions, crime reduction measures, especially those involving environmental design interventions, cannot be expected to have any significant short-term impact.
- ♦ *The extreme levels of violent crime* in South Africa may limit the effectiveness of certain crime reduction measures, such as environmental design interventions. A critical concern is the apparent willingness of offenders to inflict injury or resort to deadly violence when committing a crime. A more holistic approach to crime reduction is required where these methods are combined with other crime reduction approaches including law enforcement, social crime prevention and a functioning criminal justice system.
- ♦ *Severe levels of poverty and inequality.* This adds to the complexity of developing crime-prevention strategies and the implementation of appropriate responses aimed at reducing crime. Initiatives need to be tailored to suit the needs of both the poor and more affluent

communities, and the possible impact of different initiatives on the larger community needs to be carefully considered. The vulnerability of the poor to crime requires specific attention.

- ♦ *The urban form and spatial characteristics of the South African landscape.* Past planning policies resulted in a city structure that reinforces inequalities and also poses opportunities for crime, influencing crime patterns and levels of victimization. The impact is most severe in poorer communities where there is a general lack of resources, and where infrastructure is poorly developed.
- ♦ *Levels and effectiveness of policing vary.* Police support and active involvement is critical to the success of most crime reduction initiatives. Factors that could limit the contribution of the police include insufficient capacity, skills and expertise, unreliable crime data, inability to process and analyse crime data, corruption, poor relationships and a lack of trust between the police and the community.
- ♦ *An effectively functioning local government is essential.* In order for many local crime prevention initiatives, especially those involving environmental design, to be effective, institutional structures have to be capable of implementing these initiatives and of managing the city effectively. Obstacles to good governance include insufficient capacity, lack of skills and expertise, ignorance, corruption, a lack of community trust in officials and elected politicians, and ineffective administration and institutional structures.
- ♦ *The willingness to intervene is affected by current conditions.* Many crime prevention initiatives depend on individuals or groups willing to intervene to temper criminal activity. In many cases in South Africa this does not appear to happen. Other programmes aimed at building community

responsibility are essential and the inclusion of communities in crime prevention strategies is critical.

Although the above do not represent an exhaustive list of the challenges faced in South Africa, it is suggested that the normalization of some or all of the conditions described could significantly increase the effectiveness of crime prevention initiatives. Given these constraints, specific responses to crime have emerged that aim to address some of these challenges in one way or the other. A number of these responses are briefly discussed below.

Typical Responses to Crime in South Africa

Communities and citizens respond to crime in a variety of ways. From the government's perspective, communities are, for instance, encouraged to become involved in Community Policing Forums, but the effectiveness of these forums often depends on the resources available and the commitment of the police and the community. In addition to such government supported initiatives, citizens are increasingly feeling the need to implement additional measures to

protect themselves against victimization. The options available depend to a large degree on income levels. In poorer communities, people with very little means have to find ways to protect even the few possessions that they have. Often the only protection available to the very poor living in the most basic form of housing such as shacks is rudimentary burglar bars fitted to windows (figure 3). In extreme cases, vigilante groups have formed in an attempt to intimidate or apprehend offenders.

In more affluent communities, a range of measures is employed to address the crime problem. These include the use of surveillance cameras and electric fences to protect properties, installing sophisticated alarm systems which are often linked to armed response services, and employing private security firms to patrol neighbourhoods.

A response that is becoming increasingly popular in middle- to high-income areas is the limiting and controlling of access to certain neighbourhoods. This form of fortification has resulted in gated communities becoming a dominant feature of the residential urban landscape in South Africa. Some of the key issues related to this phenomenon are highlighted below.



Figure 3. Improved security measures in a poor neighbourhood.

Gated Communities

The concept of the 'gated community' is largely, but not solely, a response to crime and manifests itself in a number of different forms. Gated communities in South Africa could be divided into two broad categories, namely security estates/complexes (figure 4) and enclosed neighbourhoods (figure 5). Security estates/complexes refer to private

developments physically separated from their surroundings by means of walls or fences, with controlled access points. These areas or buildings are usually planned and designed from the outset to be enclosed and include a range of developments from small townhouse complexes to large lifestyle or security estates such as golfing estates.

Enclosed neighbourhoods are existing neighbourhoods that have been fenced or

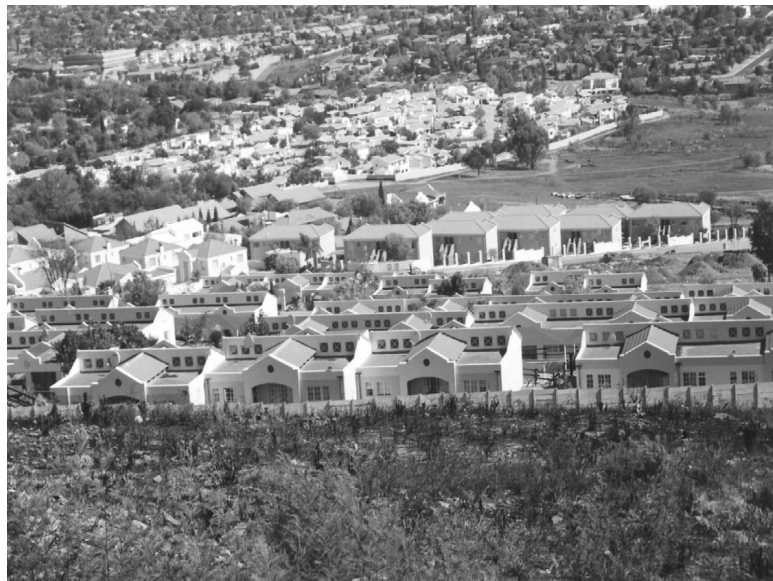


Figure 4. A secured village.



Figure 5. A gated neighbourhood.

walled in. Public roads and streets are either closed off or access is restricted through the use of automated gates, booms or security guards. These so-called road closures are illegal in some cities, while others have stringent processes in place that need to be followed in order to receive permission to continue with such an intervention.

Opinions regarding the extent to which gated communities reduce crime levels vary considerably. International literature indicates that studies have found these measures can reduce crime in some cases, or at least reduce it temporarily, while others have found no significant reductions in crime rates (Blakely and Snyder, 1997; Wilson-Doenges, 2000). In South Africa, the evidence base on this is thin as a comprehensive, scientific study to determine their effectiveness in reducing crime levels is yet to be conducted.

Despite the growing popularity of gated communities, verifiable data are not always readily available. Official (police) crime data are not provided in a format that allows reliable comparative analysis to be conducted in changes in crime between gated communities and surrounding areas. Crime data are recorded at the level of fairly large geographical blocks and not according to the physical address of the incident. These blocks do not correspond with the boundaries of smaller neighbourhoods or gated communities, which complicates comparisons between crime levels of specific areas. Furthermore, crime data are often not recorded in an electronic format that allows for GIS analysis, or the skills for this type of analysis are not available at local level.

Assertions regarding the effectiveness of gated communities in reducing crime levels generally emanate from the security companies and the associations responsible for managing such communities. Significant reductions in crime levels are often claimed, although it is acknowledged that all crime is not always eliminated. However, notwithstanding questions regarding the reliability of actual crime data, studies indicate

that those living in gated communities feel much safer inside these areas (Landman, 2004).

The studies conducted in South Africa draw attention to a number of consequences of gated communities that are often either ignored or not acknowledged. The closing off of existing public roads in particular may, for instance, impact upon:

- ♦ Public service delivery – service vehicles unable to perform duties such as rubbish removal and fire fighting.
- ♦ Response times of emergency vehicles – police cars and ambulances unable to attend to emergencies promptly due to public roads being closed off.
- ♦ Traffic congestion – closed off roads increase the traffic on the relatively small number of remaining roads that are not designed to accommodate the traffic load.
- ♦ Maintenance levels – inability to conduct regular maintenance on roads and other services inside enclosed neighbourhoods.

The severity of these problems is often linked to the size of the areas closed off, the number of these neighbourhoods within a given area and the location of the closures within the street network.

The proliferation of enclosed neighbourhoods (road closures) is a very emotive issue and has elicited some heated debate in the press and amongst residents. Contributing to the controversial nature of the issue is South Africa's history of forced segregation and the notion that enclosed neighbourhoods are not supporting current planning policies and strategies aimed at promoting integration. Within the South African context, the current need for these desperate measures to improve levels of safety and security is seen by some as being in conflict with broader ideals of an integrated and sustainable city.

The society of enclaves developing in

South Africa presents a clear dilemma. On the one hand, there is a desperate need for mechanisms to ensure personal safety and security. In many cases, law enforcement initiatives to prevent crime are seen as unsuccessful or are viewed as insufficient. On the other hand, the medium- and long-term impacts and implications of these built environment related responses need to be considered; for example, their effect on urban fragmentation and segregation, the privatization of public space through access control and the violation of constitutional/human rights when people are prohibited from entering public spaces.

Gated communities primarily employ the principles of target hardening and access control as the basis for reducing crime within a particular area. In contrast with this 'exclusionary' approach, a study focusing on the relationship between crime and the physical environment within the complex South African context has resulted in an approach to crime prevention that encourages integration and participation. The next section of this paper highlights certain elements of this approach.

Environmental Design in the South African Context

In 1997 a study of the relationship between crime and the physical (built) environment within the South African context commenced in support of the government's National Crime Prevention Strategy (NCPS) released in 1996. Based on relevant international experiences, as well as primary research conducted locally, it resulted in a South African interpretation of international crime prevention knowledge and the development of an approach that addressed specific local challenges. It is largely based on theories and principles underpinning well-known approaches including situational crime prevention (Clarke, 1997), environmental criminology (Brantingham and Brantingham, 1991) and crime prevention through en-

vironmental design (CPTED) (Crowe, 2000; Jeffery, 1977), but it has been adapted to acknowledge particular South African realities.

This approach, as described in *Designing Safer Places* (Kruger *et al.*, 2001), is summarized below, followed by a brief description of a process developed to involve communities in its implementation.

Crime Prevention and the Physical Environment in South Africa

South Africa's particular spatial and socio-economic characteristics highlighted earlier, as well as the country's history of forced segregation, have resulted in a distinct relationship between crime and the physical environment. This places a complex set of demands on crime prevention initiatives that involve the planning and design of the environment.

The South African concept of crime prevention through planning and design promotes an approach that acknowledges the inequalities stemming from the country's past. It focuses, to a large degree, on measures that would contribute to the transformation of society in general through changes to the urban form and the built environment at a macro- as well as micro-scale. It is aimed at challenging and addressing specific local spatial characteristics, including:

- ♦ the spatial dislocation of the poor, which results in long and costly commuting patterns and exposes commuters to victimization;
- ♦ the separation of communities and the vacant land (buffer strips) used in the past to divide people, providing many opportunities for criminal activity;
- ♦ the rigid mono-functional zoning of land which leaves some areas deserted at night and others deserted during the day, increasing opportunities for crime;
- ♦ the wide disparities in living levels

evident in the depressed quality of life and degraded built environments experienced by many in the apartheid city;

- ♦ the effective exclusion of many city residents from the amenities and economic opportunities offered by the city.

In order to address these challenges effectively, environmental design in South Africa needs to be implemented at various levels, involving the following:

- ♦ *Planning* – physical urban planning approaches at strategic level, such as strategies to promote the reduction of vacant land, encourage mixed land use and support the integration of communities separated as a result of apartheid policies.
- ♦ *Design* – detailed design of different urban elements, such as the transport system, roads, public open spaces and buildings and the spaces between them.
- ♦ *Management* – managing the entire urban system and the precincts within it (e.g. infrastructure, maintenance and by-law enforcement), as well as managing and facilitating the implementation of environmental design initiatives.

Environmental design in South Africa, therefore, involves more than interventions at a micro-scale that may yield immediate results such as the provision of lighting or the clearing of overgrown areas. It also involves actions to transform the structure of the city in order to create safer communities in the longer term. Furthermore, this approach to environmental design not only aims to address crime problems in more affluent areas but also in very poor communities. For this reason a people-driven process was developed to encourage community members to participate in identifying environment-related crime problems and develop appropriate responses. This process is described in the following section.

Community Participation

Participation forms an important part of governance in the new South African democracy and often contributes significantly to the successful implementation of specific initiatives or interventions. It was in this spirit that a community crime-mapping process was developed that involves community members in applying the principles of environmental design to the identification of crime problems (Liebermann and Coulson, 2004).

The community crime-mapping process is based on the assumption that people best know the areas where they live and/or work and that these people are often in the best position to point out where particular crime problems are experienced. This process is aimed at involving communities in identifying certain crime problems and identifying possible responses to these problems.

This people-driven approach to crime prevention relies on a participatory process ideally facilitated by local government officials or police officers. It involves a two-day workshop with a small group of people who preferably live in the same geographical area. A particular method of facilitation has been developed that assists the participants in understanding issues related to crime and crime prevention, possible causes and the role of environmental factors.

During day one of the workshop participants are introduced to the concept of crime prevention and more particularly, crime prevention through environmental design (CPTED) after which they are required each to draw a map of where they live and where they feel threatened (figure 6). By drawing these maps individually participants have the opportunity to make a contribution and to express themselves. It also directs their thinking towards the physical environment within which they live and starts the process of thinking spatially. The information represented on the individual maps is then transferred onto large-scale maps of the

neighbourhood. Each participant plots his/her house and the dangerous places that they have identified.

Following this, the workshop participants visit the crime hot spots and discuss the particular problems related to each place, allowing for the sharing of different experiences based on age, gender etc. Photos are taken which will be used on the second day of the workshop. The photo taking acts as an important empowerment mechanism – looking through the view-finder allows a different perspective for the picture-taker by literally focusing attention on the specific place.

On day two the photos are distributed and the places are documented according to the previous day's analysis. The information is organized according to the crimes that occur there, the victims, the offenders and the characteristics of the place. Its spatial relationship to the surrounding fabric is also considered, for example, how it acts as a link (or a barrier) between the houses and their surroundings, and the type of activity that it encourages, for instance, illegal drinking in residential streets.

The problem places are prioritized according to certain criteria, for instance the types of crime that occur there, whether these

crimes constitute priority crimes, whether other role-players are required to alleviate the problem, for example the local authority, etc. The three or four most critical problem areas are then selected and possible responses are developed. These responses can range from deciding to involve the community in cutting grass and cleaning up a dangerous open field to lobbying with the municipality to provide streetlights or demanding the closing of an illegal liquor outlet.

This process is particularly appropriate for use in poorer communities, where people often have to travel on foot through potentially dangerous areas. It has a focus on crime types that are committed in public areas where the nature of the physical environment may facilitate opportunities for crime and offending activity.

Conclusion

The mechanisms described above highlight only a few of the South African responses to local crime problems. To a certain degree, the responses discussed attempt to contextualize international crime prevention experiences in order for them to respond to local problems. However, although these measures respond to particular South African characteristics, it

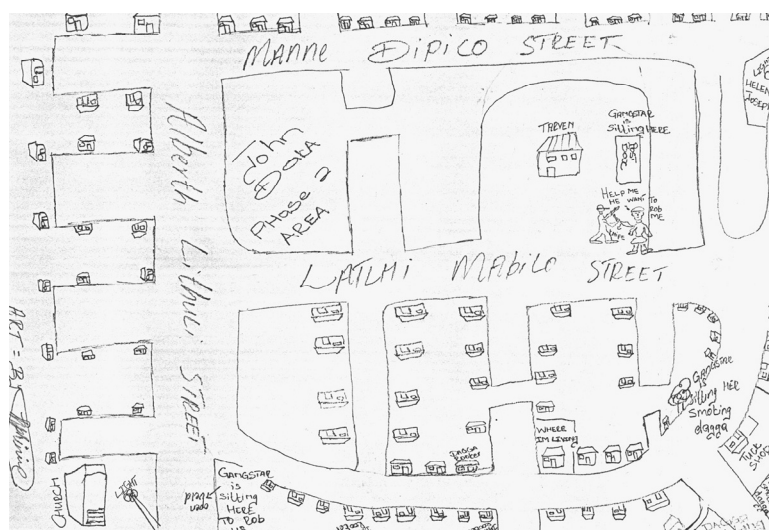


Figure 6. Perceptions of safety: a resident's cognitive map.

is clear that they do not necessarily provide ideal solutions to the problems experienced in the country. For instance, extreme forms of target hardening such as gated communities may impact negatively on issues such as service delivery and could adversely affect the city as a whole in the longer term. These responses also run the risk of merely forcing criminal elements to become more violent and of displacing crime, particularly to poorer communities.

There could also be concerns regarding those environmental design interventions that are more inclusive in nature. An approach that aims to integrate communities rather than focus on target hardening measures may not always be effective in reducing crime in a society that suffers from such extreme levels of violence.

It could be argued that, although environmental design interventions may not be as effective within the current crime situation, it may be of value to ensure that the development of the built environment is based on sound crime prevention principles in order for them to be safer in future. The question is, however, whether citizens and communities are at all concerned about the possible future impact of crime prevention measures given the extreme levels of fear currently experienced by so many.

It is clear that there are no simple answers to questions regarding the applicability of crime prevention studies conducted in so-called developed countries to the conditions experienced in countries such as South Africa. Although it may be possible to identify general characteristics that are more common to most developing countries, there could also be vast differences between these countries, and also between different contexts within a particular country. It could be that the key issue, regardless of the country, is merely that any crime prevention initiative should be context-specific and must respond appropriately to local problems. Approaches such as situational crime prevention, environmental criminology, CPTED and crime

science are intended to be context-specific and designed to respond to different problems in different settings.

Based on the South African experience, it seems that the theories and principles underlying these crime prevention approaches may, to a large degree, be universally appropriate. However, the application of these theoretical approaches and principles, and the methods used to implement a particular approach, may differ from those generally used in more developed countries. It is believed that further research aimed at identifying innovative applications of conventional crime prevention mechanisms could be of great value. One way of structuring possible research initiatives could be to use the twenty-five techniques of situational crime prevention (Cornish and Clarke, 2003) as a starting point. This would provide a framework for identifying existing techniques or developing new techniques that may be more appropriate to settings not commonly encountered.

Research could include focused studies of particular problems, country-specific studies, as well as comparative studies between different countries. The sharing of learning between countries – regardless of whether they are regarded as developed or as developing – should benefit all and make a valuable contribution to endeavours to contextualize international crime prevention experiences.

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