Samuels, R. (1996), Environmental Design and Management: People and Safe-Places

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1.0   INTERACTION

Crime Prevention through Environmental Design *and* Management, or Situational Crime Prevention, or Environmental Criminology can help prevent criminal and delinquent behaviour by reducing situational opportunities and perceived rewards, and increasing risks - from the offenders point of view - and strengthening a community's sense of responsibility for place. In other words, situational crime prevention looks at the criminal event itself - examines the intersection of potential offenders (and their 'conceptual sets') with the opportunity to commit offences (Brantingham & Brantingham, 1990; Clarke, 1992).

Various *interacting* factors ie the interaction of built-in opportunity potentials and user characteristics (Samuels 1993) generate the circumstances that hinder or encourage criminal behaviour. Surveillability, accessibility, area appearance, and community involvement and/or willingness to intervene, for instance, *in combination*, can help create a safe-place and generate an image of an area as a safe-place in both the resident's and criminal's minds. Physical defensible space features (barriers, surveillance opportunities...) can help boost neighbourhood identification, but 'can't do it all' (Merry, 1981a&b) when it comes to ensuring safety and security.

Merry (1981b) showed how a 'series of subtle design features can undermine' an otherwise overall defensible design; and how ethnic heterogeneity, for instance, can result in a general anonymity that defuses a sense of community spirit that the design might otherwise enhance. In other words, spaces may be potentially defensible and secure in an architectural sense, but are not defended because the socio-cultural and community fabric is weak.

Though the evidence suggests that poor design facilitates crime, it does <u>not</u> prove that good design necessarily prevents crime (Yancey, 1971).

Indeed, the role these architectural and urban design elements play is frequently a supportive role for other more influential situational conditions, such as social networks, home ownership and territorial responsibility (Taylor et al, 1984). Social characteristics of areas are stronger predictors of crime than physical characteristics - percentage of families receiving welfare, female heads of households receiving child support, low disposable incomes (Newman, 1976), and teenage/adult ratios (Wilson, 1978), in particular. A further conclusion of Wilson's Home Office study, however, acknowledged that if child density were constant, *design* factors were seen to exert a differentiating influence on the incidence of vandalism. Coleman (1985) claims that child density should be reduced to 17% of the adult population

or one child under 15 per 6 adults over 20, but 'social formulas' are to be accepted with extreme prudence, since situational circumstances and cultural expectations can readily override such equations.

Fried (1982) found that neighbourly relationships were a strong predictor of neighbourhood attachment, but this emerged as a preference for maintainance of interpersonal distance and respect for privacy, not for close interaction. From Campbell et al's (1976) large-scale study we know that neighbourhood satisfaction is affected by a sense that relationships with neighbours conform to one's preferences, but not what these preferences are, or how much interaction occurs.

It is axiomatic, however, that community cohesion can be augmented by physical design, by the provision of *in-built potentials* for community interaction. Examples are: multipurpose meeting facilities (where new residents to a neighbourhood or housing estate can be welcomed and meet other residents, *inter alia*), workshops, small, high quality and *integrated* outdoor spaces (people will only use outdoor space that is both thermally comfortable and secure) and/or community vegetable gardens, sport and leisure facilities, and child- and teenage-dedicated spaces (day-care centres, eg). It is equally axiomatic that potentials for both privacy and community must co-exist, and that residents should have access to both when they so desire.

Attention to details of areas at a micro-level, without recognition of the whole picture of areas which forms in people's minds (in a Gestalt sense, the whole being more than the sum of the parts) will severely limit the effectiveness of any design changes on crime and fear of crime (Carter & Hill, 1977). At the same time, however, crime is not uniform, and preventative approaches have to address the diversity of criminal behaviour, and understand the specific places where they occur, the specific times at which they occur, who might be committing the offences, and what socio-spatial elements are contributing (Brantingham & Brantingham, 1990). Understanding offender decision-making processes and motivations is thus crucial to the implementation of appropriate situational remedies - although it is probably community dynamics and informal social control which, in the end, will determine whether or not crime prevention strategies are effective or not.

Crimes against property (burglary, vandalism, arson...) and crimes against persons (robbery, assault, rape...), are similar, nonetheless, in the sense that offenders (disproportionately of the male gender) do not want to be caught, and will therefore seek to perpetrate such crimes where the chance of them being seen is minimal, and where the odds are generally in their

favour - hence where their offensive strategy is deemed superior to whatever defensive mechanisms exist.

In the case of crimes against persons, offenders will also have to make judgements about a victim's character, strengths and weaknesses, and the likelihood that others will come to their defense. Here it is the person's vulnerability (accessibility to self) rather than a building's or a neighbourhood's that is interpreted; and the strengthening of potential victims by dealing with 'victimisation personality types' is crucial to crime prevention - but cannot be addressed here.

2.0   PEOPLE-PLACE MODEL

Architectural and Urban Form *do not cause behaviour* (in a deterministic sense), but can increase or decrease the likelihood of behaviours occurring. For instance, not all 'badly designed blocks of flats' suffer from environmental crime - although such a situation 'increases the odds against which people have to struggle to preserve civilised standards' (Coleman, 1985). On the other hand, community strengthening facilities can be built-in to neighbourhoods, so that the opportunity for people to interact is heightened. Without such places, even if the motivation is there, it increases the likelihood that people will not go to the added trouble of finding convenient places to meet.

It is not enough to examine design features alone. We must understand how people perceive or interpret the meanings embodied in such features.

Social ecological analyses of crime, for instance, have consistently indicated higher rates of crime in inner city/low socio-economic status/high social disorganisation urban areas, which are taken to be indicators of ecological pressures on behaviour. However, such pressures do not produce the same effect on all individuals, *and* ecological analyses do not provide predictors of which individuals are most likely to become criminals, or where criminals live, or where precisely they commit their offences. High crime rates in CBD areas, for instance, are not reflections of the social characteristics of the residents in those areas but of the differentials in opportunities for certain types of crimes in such areas.

Moreover, ascertaining the viewpoint of individual criminals is vital to understanding the spatial patterning of urban crime. It is their motivations, decision-making trade-offs, evaluations of risks and rewards, familiarity with areas *ie* their individual socio-spatial perceptions which are meaningful, not socio-ecological statistics, or general epidemiological crime rates (frequencies of occurrence by spatial distribution).

Interactional Model of situational contingencies,
likely *offender perceptions,* and subsequent criminal spatial behaviour

i)   *situational opportunities* or *environmental cue interpretations*:
relating to defensible design features [surveillability and accessibility in particular] &
territorial markers [signs of personal and/or community appropriation/responsibility];
including target and victim identification. Opportunity potentials'...are...afforded (Gibson,
1966)...by a setting...

These situational evaluations of opportune circumstances are reflections of both '*routine
activity'* responses (where lifestyle patterns generate or multiply potentials for crime) and
'rational choice' assessments (calculations of relative rewards, risks, and paths of least effort,
and perceptions of the presence/power of guardians & gatekeepers);

ii)   *individual susceptibility*
(past psycho-social experiences, role-models, somatic and/or genetic tendencies, extroversion
personality typing, psychological stressor thresholds, 'get even' desires, thrill seeking, peer
pressures, gang membership...);

It is the joint *interaction* of the physical and the social, the situational and the motivational,
the individual and the communal...that underlies environmental design and management as a
crime prevention strategy.

3.0   URBAN PLANNING POLICY

Policy decisions can be geared towards situational deterrence and environmental
amelioration via:

i) Mixed Zoning

Anticipated consequences are: the inclusion of local facilities, residential, commercial,
recreational, educational and urban domains in a *metropolitan fabric* which, by 'populating'
these areas, results in heightened 'animation' during the daytime hours and, particularly, at
night. In principle, 'eyes on the street' (Jacobs, 1961) enhance natural surveillance
opportunities and reduce fear - due to the presence of potential witnesses and, hopefully,

people who feel strongly enough to actually intervene (or at least make the effort to alert the police). Jacobs observed that successful city neighbourhoods were close-textured, high-density assemblages of mixed land uses, where many people lived within walking distance of many destinations and there was a constant coming and going on foot along a dense network of streets. The overall result was a complex system of interlocking circles of acquaintanceship, with accepted mores and practical guide-lines for behaviour (Coleman, 1985).

Where land-uses do not have continuous occupancy there is a gap in the socio-spatial fabric, and because surveillance is lower, these places - *ie* at the 'territorial interstices' - are likely to be assessed by 'marginal' individuals as good places for crime (Taylor, 1988).

Looking at mix from another, social, perspective, Reiss and Rhodes (1961) claim that the chances of a boy becoming delinquent is much less if he lives in a mixed social class neighbourhood, regardless of his own family's status.

There are also arguments against mixed zoning. Where there are more people there are also potentially more strangers, and more potential offenders. Studies have shown that residents near small commercial centres expressed feelings of less control and thus more fear (McPherson et al, 1983); and access from non-residential land-uses to housing increased the burglarisation rate (Winchester and Jackson, 1982). And Rapoport suggests that mixed land-uses communicates a notion of poor environmental quality where purely residential (and socially homogeneous) areas are seen as the ideal (the suburban dream).

This suggests that for the advantages of mixed zoning to become manifest, very careful design is required. Most importantly, the different uses need to be *integrated,* not merely juxtapositioned, and their functions and time-space profiles considered as a whole.

Similarly, accessibility and surveillability considerations need to be built-in and co-ordinated, and community involvement and participation from *pre-design* stage onwards is an absolute requirement.

Ultimately, it is an issue of weaving an urban and suburban fabric *that is continuous*, and provides both privacy and surveillability. The utilisation of light-sensitive glazing might well be an innovation which could have a major impact on the resolution of this dilemma.

  ii) Minimum residential density

Classic urban planning policies restrict residential densities, according to pre-conceived notions that high densities are bad. Early developments in the field of environmental psychology (Hall, 1959; Sommer, 1969, Altman, 1975) however, have increased our understanding of the way people react to density according to personal space evaluations and cultural factors, and how density rules/norms can be inappropriate. Moreover, *areal density* has not been found to be a psychological stressor (Kirmeyer 1978); and Newman (1972) showed that density, *per se*, was irrelevant to crime rates. Crowding is another matter (*ie* where people/per/room density denies individuals privacy) - but this is not the issue here.

Minimum densities are required to make the social fabric continuous; to make public transportation viable economically, and to ensure sufficient passenger presence - on trains and at stations - at all times, and particularly at night - which is a natural security measure.

iii) Discouragement of suburban sprawl

Because of contemporary changes in habitual behaviour patterns *viz.* the increased frequency of both adults going to work, houses in suburban areas are often left empty during the day, and cars are also parked at suburban railway stations for long periods of time when suburbanites commute to the urban areas to work. This 'routine activity' thus generates easy targets for potential offenders due to low surveillance and low animation.

iv) Urban villages and village-forum concepts

Neighbourhood vigilance and sense of community, caring, and readiness to intervene is believed to be heightened where urban villages are formed. These are different from residential tracts because they are centered and contained. An essential element of such designs is, thus, the forum [from Roman times] or the village green [from medieval England], a place where local inhabitants can meet to talk, interact, jointly survey children at play, hold village fairs, etc.

Merry (1981b), however, showed how socio-cultural elements and micro-architectural oversights can override the potential defensibility of such designs. Project size (Newman, 1972) and/or ethnic heterogeneity can result in residents not knowing their neighbours, and not understanding *the meaning* of events. Latane and Darley (1969) showed how ambiguity in a community can generate *bystander apathy* via an interruption in the sequence of decisions which are essential for bystander intervention. Before a bystander will intervene, an event must first be seen or noticed, it must then be interpreted, responsibility to act must be

assumed, what form of assistance to offer decided upon, and finally how to implement this decision must be deliberated upon. Both physical and social characteristics can derail this sequence (see also Hackler et al, 1974, on neighbourhood alienation and non intervention).

v) vs. The Aladdin paradigm

ie urban renewal replaces *old neighbourhoods for new,* but simultaneously destroys individual familiarity, local community networks and contacts, eyes on the street, etc. Merry (1981b) found that people who did intervene to help people being victimised had all lived on the project for the full ten years of its existence, and many of their important social relationships were with other project residents. In other words, they were committed to the project, had formed social networks, and interacted on a daily basis within the project. They also intervened in spaces they used regularly. All of these aspects are destroyed when neighbourhoods are razed and new urban renewal projects erected, with neither history nor heritage.

vi) Allocation policies for public sector housing:

A mix of *unit size* in blocks of flats, or of houses size per area, creates a mix of family size - some with few children some with more children. This mix can still allow for perceived socio-economic homogeneity but allow for a more balanced teen/adult ratio.

vii) Displacement

Displacement of crime can take place in time, or space, or to a different crime, but not all criminals will continue to hunt for targets. in general, cpted has been found to have an impact on burglary/theft, street offences, nuisance behaviour and vandalism, and there might well be some beneficial *diffusion* too (clarke, 1992) - a halo effect. it seems self-evident that if preventative/defensible and benign/proactive environmental design and management were implemented *on a wide enough scale,* the issue of displacement could become neutralised.

This is a powerful argument for involvement at local authority level. decisions as to where roads and pedestrian paths should be placed, housing, shopping centres, convenience stores and public facilities located, and the nature of public open space, coupled with resolutions concerning the vigour of maintenance programs, and policies influencing the degree to which communities are brought into the design/planning procedures...could have a multiplier effect by reducing opportunities for crime at municipal level. if the state government departments of

housing and planning were also committed to a situational opportunity approach, even regional consequences could be anticipated.

4.0   INVOLVEMENT OF COMMUNITY *STAKEHOLDERS*

IN DESIGN & PLANNING

Stakeholders are those people who have a special interest in an issue. Understanding their needs and preferences, and including them in neighbourhood decision-making at all levels enhances their involvement in day-to-day caring for, and investment in, their local areas. This is also called Community Empowerment, or Territorial Appropriation, or Manageable Space (Perlgut,1982). Community involvement sends a message to potential offenders that a place is 'owned' (involving rational choice/risk-reward trade-offs). It is a *soft* management policy to complement a soft architectural design (see later).

An important issue concerning community involvement is *the stage* at which they become involved. If their role is reduced to 'comment', during the conventional 14-day public scrutiny period, *ie* after the decisions have been made, this is notional involvement. The community must be involved at the pre-design and pre-planning stages, when priorities and alternatives are being considered, and at every other stage of development and use, including post-occupancy management periods, and when projects are being evaluated.

For territorial functioning to be effective it should be based on *small group* dynamics *ie* at the level of the street*block,* not at neighbourhood level (Taylor, 1988). Taylor et al, 1984 also found an association between being younger, a woman, and of higher income, and stronger territorial functioning. Perhaps it is such individuals who should be approached to lead and organise community meetings.

It is also vital to appreciate that *interpersonal perception* plays an important role in people understanding each other (reaching consensus), whether the relationships are within the community, or between them and managers, or planners, or police. Social theories of communication recognise that a person's behaviour is not based simply upon their private cognitive construction of their world, but is also a function of what *they believe other people believe.* What one person thinks about how another person evaluates an issue is crucial, and this includes what 'I think about how you think of my evaluation of an issue ie perceived congruency - compared to what I actually think of the issue - which is also an indication of whether I will be understood or misunderstood (McLeod & Chaffee, 1972).

Similarly, perceptions by criminals of a community's resolve and commitment to a place will influence their behaviour, and the image that comes over can be vital in this regard (see Offender Perceptions below).

5.0   FEAR AND CRIME

Fear (perceived risk) influences behaviour (limits options). People develop strategies to avoid places/times/modes of transport etc which are perceived as threatening. Where people fear to go out/use an area this results in less people using it, which further enhances the fearfulness of users (feelings of isolation) and crime opportunities (due to low surveillance potentials).

Fear of crime is more widespread than crime itself; and does not correlate well with the geographic incidence of crime. There is also a multiplier effect at work, for instance, people who have been victimised tell their neighbours and friends, whose fear levels rise. Similarly, where residents perceive their home territory to be disorderly (abandoned cars, sites, houses...) they are likely to feel that the community itself is not viable, and thus feel vulnerable themselves.

Although asking residents to draw *fear maps* (as part of a community safety audit, for example) might increase fearfulness, it can also be argued that such fears must have been latent in the subconscious to emerge so readily, and that suppression of fear is not the equivalent of having no fear. Ultimately, expressing fear could be beneficial if it raises the awareness of neighbours to the existence of other people's fears in similar places, and, most importantly, if something is seen to be done to alleviate those place-related fears via environmental design and community management.

Merry (1981b) asked residents from 4 ethnic groups living in a housing project to indicate, on a map, areas of the project which were safe and which were dangerous. Respondents differed in their perceptions, and had different neighbourhood ranges, and, again, there was a clear incongruity between a sense of danger and the objective occurrence of crime. Areas in front of residents homes were described as the most safe (and 70% of interventions for any crime occurred in these areas) yet these were also the frequent locations of robberies. This sense of safety here is clearly unrealistic. Furthermore, the presence of individuals perceived as dangerous in otherwise defensible spaces (a playground frequented by black youths, for instance) influenced perceptions of safety although no robberies actually occured there - people avoided the area.

It was also clear, at the same time, that residents found narrow dark walkways, low underpasses, and convoluted entrances to buildings to be dangerous, *and* robbers also considered these places to be ideal for crimes. Residents avoid these areas, and hence the actual rates there were not as elevated as might be expected.

6.0   OFFENDER PERCEPTIONS

Resident perceptions can indicate where disorder and threat are high in a residential context, and in such areas a redundancy (Rapoport, 1982) of territorial cues is required for territorial functioning to be effective - for example, both fencing and planting to keep intruders out (Brower et al, 1983). Understanding territorial judgments in a criminal's mind is of great importance to environmental criminologists and designers, and to police. How, for instance, do potential offenders 'weight' various defensible space features? What is the combination of factors that denotes a 'susceptible or immune' site? Do they read but override territorial demarcations? Do they assign importance to decoration - as a sign of occupancy and proprietary attitudes? From the resident's point of view, for instance, *decoration* was found to be the most important territorial safety marker (Taylor et al, 1976).

Carter & Hill (1977) were able to explain 75% of the variation in crime rates after interviews with convicted property criminals, with regard to their evaluations of areas where they committed the crime. The important issues were: familiarity with an area, the 'hardness' of the 'mark' (target) and the perceived socio-economic status of an area. In general, houses that looked unattended, and stores that had no alarms were considered as good targets/easy marks. There were, nonetheless, differences amongst the criminals themselves, due to their different races (and, of course, different crimes will reflect different socio-environmental factors). The 'hardness' of the mark was particularly important for the 'Whites' - including the ease of getaway. Gabor et al (1987) found, similarly, that robbers considered whether there was a 'small street close by to park a car and to remove the disguises afterwards'. Familiarity with an area was particularly important for the 'Blacks', who felt very visible in affluent White areas, and thus tended to commit crimes close to their own residential areas.

Phelan (1977) reported that ex-burglars perceived the vulnerability of an area in terms of its familiarity to them, and the fear of being seen and reported. The mere presence of people, albeit a deterrent in the eyes of potential offenders, does not mean that bystanders *will* intervene (Shotland & Goodstein, 1984). There is a complex personal-social calculation that occurs in such situations - considerations of familiarity with the victim, estimations of

personal danger involved, fear of retribution or of harassment as a witness, uncertainty as to whether a stranger near one's frontdoor is simply an unknown guest of another resident.

There is also often a reluctance to call the police - because they are perceived as being too slow to come, rarely get back stolen property, or because of a fear of being harassed themselves eg Blacks perceived the police as hostile to them (Merry, 1981b).

Merry (1981b) interviewed young men who lived on a multiracial housing project in Boston and commited robberies there, about their attitudes towards crime, the design of the project, and their choice of victims and crime opportunities. They also drew a cognitive map of the area, in which they indicated the places they considered to be good for robberies, and these maps agreed closely with the distribution of actual crime incidents. 'They try to commit crimes where they will not be observed. Favourite places are narrow and enclosed pathways where visibility is poor and witnesses nonexistent' while 'open courtyards are considered poor robbery locations since there are so many eyes there'. The street is not considered a good place except where there is little traffic or windows are obstructed by fences. The availability of good escape routes is an important aspect of environmental design considered by the robbers, and once a victim has been selected he/she is trailed until a good location is reached ie one with multiple routes, twists and turns, tunnels etc, where pursuers can be eluded. In general, dark places and nighttime are preferred since victims have trouble identifying the robbers later.

It was clear that the robbers interviewed by Merry knew where those residents lived who would call the police, and they avoided those areas. They took into account not only the possibility that people could look out of strategically positioned windows, but also the likelihood of this happening. A plaza outside a building housing elderly people was considered a poor location because the old people were always looking out of their windows; other people were known to shout out when they saw something happening, and such places were avoided.

Taylor (1988) reported that 'it appears that offenders against persons, as well as property offenders, view the mere presence of people outdoors as a risk factor'. Rengert & Wasilchick (1986), in their interviews with suburban burglars, provided direct confirmation that offenders desire to avoid well-peopled blocks. Similarly, since muggings occur in more deserted areas with fewer natural guardians, it can be inferred that offenders are choosing sites that lack 'eyes' (Rhodes & Conly, 1981).

Although Phelan (1977) claimed that both symbolic and real barriers between public and private territory were hardly perceived at all by ex-burglars, it is <u>not</u> helpful to look at defensible features in isolation. We have already seen that area image (in a Gestalt sense) is different from the meaning of individual site characteristics.

In general, it seems that potential criminals consider which areas are architecturally suitable to commit particular crimes (particularly surveillability, obtrusiveness, and access/egress possibilities), and also consider social factors which influence the likelihood that local users and/or residents will intervene (territorial personalisations, ethnic and socio-cultural characteristics).

Their attitudes and behaviours are clearly socio-spatial.

7.0 CRIMINAL VICTIMISATION

Victims, not unlike criminals, act in rational ways. The experience of being victimised constitutes a radical threat to and disruption of a victim's sense of self, sense of order, sense of community and sense of place. It is critical not only that environmental design helps pre-empt crime but also that the environment and the community can demonstrate that the victim's extreme sense of vigilance and helplessness are no longer necessary.

Sexual harassment is a phenomenon that must be consciously avoided by women. In reality, however unfortunately, some places should be avoided, some times of day are less safe than others; some lifestyle activities increase vulnerability to victimisation. A range of reasons why victims *fail to report* have been suggested. Given the unreliability of recorded offences, what is required to adequately reflect the realistic situation are victimisation surveys, particularly micro-scale surveys

Example of Macro Survey: The *First Australian National Crime Victim Survey /1975:-*
Offences against the person were shown to occur predominantly *at night* - robbery with violence 83% of the time, assault 70% of the time, and rape/attempted rape 60% of the time. 53% of the robberies with violence and 42% of the assaults occurred in a public area / outside, while 31% of the rapes / attempted rapes were located in a public area - but 62% occurred inside or near the victim's home.

8.0   ARCHITECTURAL AND URBAN DESIGN PRINCIPLES:

CPTED CHECKLIST

1. Surveillability   2 Accessibility   3. Suggestibility/Territoriality

8.1:   SURVEILLABILITY:

8.1.1   Visibility In And Around Buildings

a   Inside Buildings -

*   Lobbies, halls, elevators and stairwell/fire escape stairs are places where most crime occurs (Newman, 1972; Rouse & Rubenstein, 1978). Similarly, Newman, (1972) found that where there are multiple alternative escape routes from the inside of buildings, eg interaccessible lifts, staircases and exits, crime rates are higher. And he also pointed out that where corridors are external they are open to view from the street, whereas internal corridors that do not have windows onto them from flats allow criminals to circulate freely.

* In high rise residential blocks, it is the ground-floor apartments which are most victimized (accessible), then top floor apartments (access from roof, plus low surveillability).

* Shaw Associates (1983) suggests that there is a conflict of interests between safety and security in the provision of fire escapes. In their study of a housing estate they found an annual rate of 1 fire per 5 dwellings, and it seems likely that this high incidence of arson was exacerbated by the fire service's requirements for extra staircases and exits, areas where criminals are shielded from scrutiny.

b   Project And Building Size

* The higher a residential building, the higher the crime rates; also, the larger the project, the more crime experienced (Newman, 1972). However, Newman found that the number of dwellings per entrance had a stronger correlation with crime than simple undifferentiated size. Coleman (1985) recorded that the greater the number of dwellings per block, the

number of storeys, and/or the number of interconnected exits, the higher the level of social malaise (as indicated by vandalism, graffiti, litter, fouling [excrement/urine]; and children in care). However, (Hillier, 1986) commented that the larger the size of a project the more people and teenagers living there, and the greater the probability that littering etc will occur.

Coleman, nonetheless, found that litter was present in 86% of the 4,099 blocks of flats studied, compared with 20% around the 1,800 single-family houses in the same area. The comparable ratios for presence of urine were 44:0; for graffiti 76:1; and for vandalism 39:2 (figures rounded).

A technique apparently used in the north of England is to lop off the top storeys of blocks of flats when renovating them, and reduce them in size. Where walk-ups are feasible, no lifts are needed. Lift maintenance is a regular cost and breakdowns are very expensive to remedy, and tenants are usually responsible for this (domain for harassment too).

c   Siting Of Buildings And Houses

*   Alignment of entrances, driveways, gardens and especially windows...to generate enhanced opportunities for vigilance...by overlooking adjacent spaces =intervisibility

* Similarly, entrances to multiple-family dwellings should be oriented towards adjacent city streets, which then come into the zone of influence of residents (Angel, 1968; Perlgut, 1986). Units visible from roads and/or well-travelled walkways suffer less crime (Rouse & Rubenstein, 1978).

* Merry (1981b) mentions that where dwellings only face into courtyards and do not also face the regular streets, there is not enough of general interest happening in these places to generate regular patterns of street watching (Jacobs, 1961). In only one place on the project Merry evaluated did residents sit in front of their houses, and this was the block that faced onto the regular street.

* Entrances should not project out from the facade, because this obstructs the view down the street (sightlines ie). Similarly, concrete pillars, twists/turns etc.

* Corner houses with L-shaped gardens and waist high walls face both streets, whereas end-houses often have a faceless wall facing onto one of the streets, which diminishes surveillability. L-shaped buildings enhance surveillability.

d   Street And Footpath Design

i) Pedestrianisation, and footpath design

*   Angel (1968) posits that where pedestrian presence is low there will be no crime ie few potential victims (this is debatable); that there is a 'critical intensity zone' where most crimes take place ie increased pedestrians = potential victims, but not enough people for adequate surveillance; and that as pedestrianisation increases further, the streets become safe again.

* Paths should be located not too near windows of houses, but proximate (for surveillance). Well designed path systems could reduce vandalism, nuisance behaviour and theft by separating children and adolescents from trouble spots and 'good' opportunities.

*   Creation of 'natural routes' from home to school and to other local facilities reduces the number of pedestrians cutting through private yards, apartment or church parking lots.

Paths should not allow for short-cuts across property.

* (Dutch) WOONERF or mixer courts: traffic calming strategies allow slow-moving traffic but give   priority to residents and pedestrians by widening footpaths, installing street furniture, changing surface materials, with clearly defined and raised pedestrian crossings. Residents have jurisdiction, and surveillability is maximised = safety and security.

ii) Grid-type street design, and cul de sacs

* Grids allow long lines of sight (for residents, and police), even if they are cul-de-sacs (see later). Avoid narrow alleys & blind spots.

* Cul de sacs:

Planning texts frequently attribute enhanced cohesiveness to cul-de-sacs but without substantial evidence to support these conjectures (cf. Whyte, 1964). Mayo (1979) did find more neighbouring on cul-de-sacs than on straight and curved streets; but attributed this to

the fewer people living there. Brown and Werner (1985), however, found that neighbourhood ties were stronger on cul-de-sacs than on through streets. Cul-de-sac residents indicated a greater sense of: identity [feeling responsible for the block, spending leisure time there, feeling proud of its appearance]; security/community [satisfied with block security, believing that neighbours would stop a vandal, feeling that neighbours respect their privacy, and feeling a sense of community]; more decorating (territorial markings evaluated at Christmas and Halloween periods); and more familiarity and contact with neighbours [relationships involving recognition, borrowing, sociability, intimacy] than through-street residents. Together, these attitudes and behaviours represented a heightened sense of neighbourhood attachment.

It is always possible that people who have chosen to live on cul-de-sacs desire closer contact and mutual visibility with their neighbours, in the first place. In this sense, the street design is more a facilitator of such environment-behaviour transactions ie any nascent tendencies and preferences and emerging behaviours can find expression more readily where the environmental design is congruent with them.

   e   Cluster/Court Design (Medium Density Housing)

*   Principles: human scale (2/3-storey, townhouse type), harmonious with streetscape, integrates open space, allows for privacy (no overlook onto private open space = NB) and surveillability (overlook semi-private open space), requires careful siting for garbage bins, open garages visible from residences or locked individual garages, short (well-lit) walking distance from parking to dwellings, non-continuous balconies, common well-maintained central zones, child spaces, teenage spaces, street furniture, one entry per few families, secure lock-up areas
. Clearly delineated public space, community space and private space, and transitional filters through which pedestrians pass from one to the other, are a hallmark of successful medium density housing.

* Physical proximity and the clustering of dwellings (Whyte, 1964) or dormitory rooms can be considered to provide an in-built potential for friendship and group formation; but whether or not friendships (or hostilities!) actually form will depend on intervening variables such as socio-cultural homogeneity, routine behaviour patterns, and similarity between value systems and interests - which frequently lead people to seek like-minded individuals far beyond their immediate living domains (Gans, 1967). Physical propinquity, thus, is complemented by functional distance (Festinger et al, 1950), which depends on design and positional relationships such as the orientation of dwelling places to one another (front and back doors,

windows), location of paths to commonly used facilities, position of letter boxes, garbage bins etc. This functional distance depends, thus, on recurring and shared activities in time-space, which in turn provide situational opportunities for social contact.

*   Because of scale and design, clusters also allow for clear hierarchical demarcation (gradation) of public, semi-public and semi-private domains - physically & symbolically (Brill, 1976a&b; Perlgut 1982).

*   Merry (1981b) evaluated a major urban renewal housing project which had one of the highest crime rates in the city (for robberies and assaults particularly). She conducted her survey in the areas designed as low-rise cluster housing around quiet dead-end streets (about 50% of the project). The design consisted of four-storey row houses and two-storey maisonette apartments clustered around small courtyards.

Access to the upper apartments was via an exterior stairwell; thus there was a minimum of interior public space. Small porches and patios were shared by only two dwellings. Pathways were lined with trees, play areas for children and adolescents were provided, with adjacent sitting areas with benches, and clearly visible from the adjacent dwelling units. Only four families shared a single entrance. All the defensible design elements suggested by environmental criminologists were present, yet crime was frequent, and over half the robberies reported in her victimisation survey occurred in areas which are architecturally defensible.

In terms of design, Merry mentions several micro-features which could have contributed to this situation. The exterior stairwell, for instance, makes four turns before arriving at the landing, which makes it impossible to see who is in it before beginning to ascend or descend. Glazing in this stairwell was translucent not transparent; and the front of the apartments afforded hiding places between the fences enclosing the trash can area and the sides of the stairwell. Both obstructed the view of the porches from the courtyards. Half the robberies took place on these porches and in these stairwells - where visibility was obstructed.

Most importantly, the repetition of building styles within a multitude of spatial configurations was found to be confusing by the residents, who could not readily form a mental image of the project (unintelligible in Coleman's terms (1985), illegible in Lynch's terms (1960), or having poor space syntax in Hillier's (1984) - see 8.1.2). The project had a reputation in the neighbouring communities as a 'mazelike area into which criminals could easily vanish'. Residents said they would have felt safer living in a neighbourhood with regular street patterns and house entrances which were flush with these streets. The insulation of the

courtyards from the regular street activities also inhibits surveillance since residents find little of interest to look out at, and so do not sit on their porches, or look out of their windows.

Moreover, half the residents were Chinese, the rest Blacks, Whites and Hispanics. Because this was a multi-ethnic area, and an urban renovation zone, this community was not cohesive (such as those urban villagers described by Gans (1962)), and 'social cleavages' between the groups were very evident. Bystander apathy is to be expected in such situations (Latane and Darley, 1969), despite the potential defensibility of the cluster design.

f   Window Size And Placement...And Glazing Type

* Placement/location for overlook/surveillability of non-private spaces.

* Glazing type (light sensitive or photochromic glass) - permitting surveillance by occupants of outdoor spaces but at the same time diminishing the capacity of outsiders to see in...ie people want to see out but do not want others to see in (invasion of privacy). In any event, glazing for surveillability should not be frosted, patterned, beaded.

* Elderly people also spend a lot of time sitting looking out of windows, watching the world go by, thus it is important to design windows out of which a seated person can see. This is relevant for dwellings at ground level, and first floor level. Above that, surveillability is minimal anyway, and it could create problems re children falling out of windows. The bottom half of the window should be unopenable, in any event.

* Bay windows allow for surveillance from three angles.

g   Lighting (And Visibility)

* Level (and type) of internal and external lighting is VNB.

* Sterner (1987) interviewed women about the design characteristics that contribute to them feeling unsafe, and 'dark; poor lighting' was the most frequently mentioned issue (60% of responses; 'deserted', and 'not visible to others', were 2nd and 3rd).

* High spectral quality lighting (ie daylight-simulating) can increase an individual's sense of well-being (less headaches, less fatigue: see Samuels and Ballinger, 1992) - thus, by adding quality to the environment via lighting, does this encourage people to respond positively to

it? Vs. 'zit' lighting strategy, which makes people look ugly (eg: McDonald's case study, quoted in McCamley, 1992).

  h   Vandal-Proofing

*   For lighting and glazing, in particular. Care must be taken not to create a fortress image by using large expanses of concrete and other hard surfaces, bars on windows and doors, etc. Protecting glass from breakage is, however, extremely important, to maintain area image and surveillability possibilities.

  i   Surveillability Of Parked Vehicles

*   Underground parking requires CCTV (where possible) and controlled/scrutinised access; open-air parking should be proximate to owners & visible from residences. Lighting is crucial, and gate-keeping an important deterrent (restricting access). Poyner (1993) showed how CCTV systems at a University parking lot reduced the incidence of theft from cars.

  j   Integrated Open Space

*   Small open areas, built-into residential and commercial domains; or narrow (strip) parks with high visibility from all sides - not large, separate, wooded parks, urban forests.

  k   Open Landscaping

* Low bushes and hedges, and high canopy trees; level ground

  l   Boundary Walls

*   Can offer hiding places. Once scaled, they offer protection against being seen. Open fencing can overcome this (fencing quality is NB ie not to give impression of 'prison' enclosure) (open fencing is also an anti-graffiti measure).

8.1.2   *Urban Visibility*

  a   Space Syntax

* Hillier (1984) derived a technique to evaluate how the spatial configuration of buildings defines public space, and its use. in order to encourage people to move freely and interact often, dead-end spaces and secluded streets with 'short sightlines' should be identified (and eliminated) via space syntax techniques such as convexity maps and 'axial' maps.

The convexity map shows an area broken up into convex and concave segments. a convex segment is one in which a person standing at any point on the perimeter of a segment can see another person at any other point on its perimeter. a concave map has blind spots in it (see over)
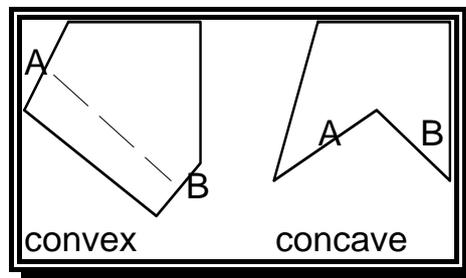
An axial map shows the lines of sight between convex spaces. the more a line is crossed by other lines, the higher its segregation value; the less it is crossed the higher its integration value ie the greater the number of segments that have to be crossed the less direct is the route between the spaces connected to it. such a space is said to be less intelligible, and segregated layouts tend to be sparsely populated. the 15% of axial lines with the lowest values indicate the' integrating core' ie those areas used most intensely.

The safest public spaces are said to be those with good flows of people, and intelligible (integrated) routes with long sightlines. coleman (1985) agreed that if the route system is unintelligible, a few places are likely to drain off all the street life, leaving other places deserted.

A researcher at the bartlett school of architecture and planning, university college, london, used the technique by overlaying geographical crime rate maps with integration value maps, and showed that the likelihood of a more segregated dwelling being burgled was highly significant (quoted in mills & armstrong, 1993).

b   Enclosed Spaces

* Underpasses (replaced by overpasses, preferably), railway stations, shopping malls, parking stations, etc require transparency (via lighting, & CCTV, & open design, & guardians)

   c Urban Places

* Designed for overlook (from surrounding buildings and facilities).

* Designed for extended time-space animation vs. deserted streets. Zoning CBD for residential VNB in this process, as well as the juxtaposition of activities used at night as well.

* Networked video surveillance is a recent addition to the armoury of crime detection and deterrence campaigners. King's Lynn, a city in Norfolk, England, has installed a sophisticated urban closed circuit TV security system, which is monitored from one command room on a 24hr basis. Thefts from cars and vandalism have fallen dramatically; and 96% of residents said they were happy to be monitored in this way - in other words, their perceived quality of life was not diminished by the electronic surveillance (New Scientist, 8 May, 1993). As long as such surveillance is restricted to public areas there should be no reasonable concerns about the insidious introduction of an Orwellian "Big Brother" who watches and controls our behaviour.

It is claimed, moreover, that the presence of the video surveillance system should not be hidden. Indeed, knowledge of its presence is said to contribute to its success, ie its deterrence capacity rather than its detection capacity is its most powerful feature. Furthermore, cheap new technologies using, for example, light detecting silicon chips which convert pictures into digital signals (and which can be enhanced if required), and 'neural' devices that 'know what not to look for' will soon be available on the market.

   d Street Design

* Streets should be structured so as to be intelligible and legible - easily 'read', labelled/named, clear nodes & landmarks (Lynch, 1960; Hillier, 1984) - and to generate patterns of movement which allow some spaces to be more used than others but never leaves any space unused for long. Similarly, secluded alleys, dark back-lanes, etc make people feel

apprehensive and vulnerable. The siting of an all night taxi rank in close proximity to clubs, pubs etc could be an example of intelligent juxtapositioning of street-related facilities.

  e   Transport Nodes

* Design and management of railway stations, bus stations = VNB
* [and of trains themselves, eg access from one carriage to another, CCTV...]

  f   Urban Beaches

* Police patrols, citizen patrols (lifesaver groups?); lighting at night of esplanades and areas proximate to walkways, etc. Lighting on beaches?

  g   'Offence-Prone' Areas

*   Ecological/spatial analysis of crime = central zones of city crime rates are higher, but reflects 'antecedents', eg distribution of public-sector housing in Britain to periphery = rates of crime increased there (Herbert and Smith, 1979)...[see discussion of ecological analyses, earlier].

  h   Targets, And Target Dispersal

*   Target dispersal involves the diversion of potential offender flows. Licensed premises, clubs, electronic games arcades, cinema complexes, fast food outlets etc draw groups of youths, which individually do not create any disturbance. Where such establishments are grouped, a multiplier comes into effect, and an area can get a reputation.

* From the burglars point of view, targets need to be near to a quick access/egress route, and the more lightly used a facility (convenience stores, eg) the more vulnerable it is (Duffala, 1976).

*   Large open spaces unused at night require special consideration: playgrounds, sports facilities and school playing fields, university campuses. Partial solutions include, for instance, more, smaller High Schools, mixed in with other facilities, visible from other buildings, and used by the local community at night. Campus security at 5 Sydney universities is currently being evaluated (Samuels, 1993).

    i   Vacant Sites

* Twice as many abandoned and stripped cars were found where shops and houses were vacant ie where there is minimal territorial control because they such areas are weakly claimed and poorly surveilled (Ley & Cybriwsky, 1974). Access to building and vacant sites should be strictly controlled. Vacant buildings are places used by drug-dealers etc.

Building recycling is VNB in this process ie rather than building new buildings and abandoning the old, and the neighbourhoods in which they are located as a consequence, they are refurbished.

OVERLOOKED PLACES...Places that can be overlooked; cannot be overlooked; ...and have been overlooked...

8.2   ACCESSIBILITY

    a   Access/Egress Control:

** Via entry controls, gatekeepers, concierges, supervisors, park attendants etc

* And...physical mechanisms i) relationships of external/out-buildings to main residence *ie* access from roof, fences and walls, carports, drainpipe access; height of windows above ground, prickly shrubs beneath windows, locked-open ventilation systems for windows, height of balconies above ground;

* And ii) target hardening *viz.* locks/bars, anodised aluminium security doors, with double cylinder mortise locks, pin numbers, swipe cards & front door peepholes, and entry-phones. Entry phones are vulnerable to vandalism, and once damaged increase the sense of lack of control, since legitimate visitors cannot gain entry.

At the same time, the social issue of limiting access via front door control to multiple family buildings is problematic. When legitimate users encounter someone at the door who does not have a key but is trying to gain access, they are reluctant to seem unfriendly, or uncivil, are unsure if the other person is legitimate or not, or might well be intimidated if the other person(s) is aggressive or threatening etc.

b   Above Ground Walkways

* Linking housing eg with walkways in the sky, requires access to them to be controlled, rather than removal of them , thereby inconveniencing legitimate users (Coleman, 1985).

c   Street Design

* Cul de sacs 'privatise' domains, reduce stranger presence (have to penetrate these domains); and more territorial functioning is found on cul de sacs (Brown & Werner, 1985)

* Burglars work in areas with which they are familiar...which is also due to their travel patterns (which routes they use) (Repetto, 1974). Thus, by limiting through-accessibility eg via the extensive use of woonerfs, and cul-de-sacs, accessibility to residential domains can be limited.

d   Front Yard/Front Door Relationship To Street

* Entrances flush with the street were found by Newman(1972) to be least vulnerable to crime; those which are setback are more vulnerable, and those which face away from the street are the most vulnerable of all. Similarly, where houses are oriented to all face the same way (north, eg, which is beneficial from an energy and comfort point of view) they should not have high walls to allow for privacy, since that removes their ability to survey the public domain - and once a wall is scaled, a criminal is secluded from outside view. There is a conflict of interests here. Careful siting, and angled facades might help.

* Hillier's (1984) space syntax evaluation claims that every segment of a well integrated circulation system has to have at least one building entrance opening on to it.

* different cultural designs (USA, UK, Arab) indicate different levels of accessibility to front doors/thresholds.

* backyard & side entrance also require controlled access. Side entrances are wholly within the occupier's territory, and permit access to rear gardens without the back alley problem (illegal entry for strangers, toddlers wandering off...).

* symbolic barriers can be powerful deterrents (link chain fences, eg), indicate a territory is claimed.

    e   Distinctiveness Of Entrances

* (Symbolic): textures/levels/patterns & setback ('out of bounds' message, helps create semi-private space)

* Prominent naming & numbering (also useful for crisis police visit)

    f   Boundaries

* Physical &/or symbolic; removal of short-cuts for strangers (gaps in boundaries, *ie*); but do <u>not</u> block territories in *ie* segregate groups into small, walled zones.

    g   Parks

* VNB: transparency/lighting & contiguity to other facilities & their time-use profiles.* 'no man's land', more likely = 'no women's land' !

    h   Children's Playgrounds

* Limited accessibility for adolescents to (with clear visibility from surrounding windows).

    i   Adolescent Places

* Provision of, eg, separate, paved areas for roller-blading, skate-boarding, BMX bike riding; and casual meeting, with/without structured activities.

* Limited accessibility for adults (Lynch [1977] mentions adolescent's preference for unstructured, unsupervised areas - otherwise they will not use them, which defeats the aim).

    j   Location Of Facilities

* Influences accessibility to them, in general (what is near commercial, entertainment, residential vacant lots, etc ?).

8.3   ENVIRONMENTAL SUGGESTIBILITY AND TERRITORIALITY

Environmental suggestibility is largely influenced by territorial markers, and area imagery, and Human Scale

   a   Environmental Or Territorial Markers,   **Or Environmental Cues**

* Are indicators of ownership, occupancy, investment, caring...and include explicit elements such as "Keep Out" signs, and implicit elements such as upkeep and beautification and symbolic signs of uniqueness, etc. These are non-verbal messages to people in settings about how they should behave there (Rapoport, 1982) *ie* there is an association between physical cues and appropriate social behaviour. Physical and symbolic features **cue** people into a setting.

* Front gardens (min 3m depth) are perceived as buffers, and should also have waist-high walls/fences, and gates (and gateposts). Houses with front gardens, fences and gates were assessed as having the lowest scores on the Coleman 'disadvantagement' scales. These markers and signs project a powerful territorial image; and have been traditionally associated with the concept 'our home', in 1st world countries, over the centuries. The worst scores were recorded for the purpose-built blocks of flats.

* Territorial marking of entrances to housing distinguishes them as individually controlled domains. A large number of families using one entrance diminishes such territorial suggestibility. Entrances, and domains in general, need to be designed to have a low level of ambiguity.

* However, Signs of occupancy can also convey a negative image, of a place that is uncared for, eg: old fridges on verandas, abandoned property in streets, garbage bags left out on streets etc.

b   Area Images

*   Gestalt theory suggests that individuals group objects by proximity and similarity, and Carter and Hill (1979) found that criminals expressed an intuitive 'feeling' about an area, in terms of criminal opportunities and risks. These 'background expectancies' were important to the formulation of their strategies. Specifically, criminals formed images of areas according to their familiarity with an area, their perceptions of police presence there, and the perceived difficulty of making a 'mark'. These images influenced short-term operational considerations (tactics) regarding specific crimes in specific places. Also important was the self-perceived obtrusiveness of criminals in high socio-economic areas.

c   Stigma

*   Attached to building type/style/form and/or location in crime-prone area can influence proprietary attitudes and defensible behaviour. Allocation policies NB. Also using similar materials, designs, colours etc *ie* generating a streetscape similar to other buildings in street = fit in, not stand out as different, unobtrusive. Architectural idioms (characterised by a specific design language) can isolate buildings, which are thus perceived as more vulnerable.

d   Legibility Or Building Semiotics   (Language Of Space)

*   Is building or place what is seems to be? *ie* can users (legitimate and illegitimate) associate its function with its style/form, thus know how to act 'appropriately'.

*   Clusters within clusters - enclaves identifying smaller groups within larger, with unique identifying physical features, and colour 'coding'.

*   Where people can easy navigate around cities *ie* have territorial cues such as *landmarks* (Lynch, 1960) built into areas, to which they can refer, they get lost less often, and get a greater sense of being *somewhere.*

e   Jurisdiction   (Dominion Over Domain)

*   Via clarification of public/private territory (primary territory, secondary etc as indicators of environmental roles expected). Clear demarcation between private and public spaces and location of semi-private = message: 'not for everyone'. Formally: residential leases can specify rights and duties *re* maintenance of every space on a site.

f Colour

* Is associated with temperature (warm and cool colours), associated with emotions (excitement with red, calm with blue) and different levels of activation in the metabolic & nervous system (blood pressure with red). But different people react differently.

* (Ott, 1982): 'For some unknown reason, pink and orange produce the greatest loss of [muscle] strength, and blue the least loss'. In keeping with full-spectrum theory, the coloured surfaces of a room should not be all of one colour -especially not pink or orange. White is the exception, since it reflects all the wavelengths. Make interiors as much like the natural colours outdoors. 'Brilliant pinks and oranges only last about fifteen minutes in nature (sunsets), which has been determined as the maximum time a person should be left in the pink cell of correctional centres and prisons before the beneficial [calming] effects begin to give way to the long-term effects of increased depression, aggression and violence'.

g Quality

Environmental design and management may even help encourage *virtuous* behaviour by creating a sense of satisfaction and well-being as a result of the benign and aesthetic quality of the architectural and urban environment. appearance engenders pride in residents, is associated with feelings of satisfaction and attachment, and suggests to the potential offender that an area is under control. Fried (1982) found that *residential quality*, which is the most important element of residential satisfaction and attachment, was largely composed of housing quality and neighbourhood quality (particularly ease of access to nature and outdoor spaces). It is also feasible that neighbourhood *blocks* - ie streetblocks that function as small-scale social units- which have extensive real and symbolic barriers are also of higher physical quality generally, and that the two issues interact (Taylor et al, 1984).

There do seem to be some places to which individuals can become more easily attached ie form 'territorial cognitions' (Taylor et al, 1985) and enact proprietary behaviours, because of the quality of the locale ie their sense of satisfaction with a place or situation engenders a corresponding desire to maintain that state of affairs, which manifests as a heightened sense of control.

Moreover, as quality of the environment increases, fear of crime tends to decrease (people tend to associate such places with a caring community, or municipality), whereas a disruption of 'territorial control' processes engenders high fear levels (Taylor et al, 1981).

Coleman (1985) derived a 'disadvantagement score' (<u>the inverse of quality,</u>)
for evaluating housing in terms of design characteristics,
and measured the incidence of social malaise occurring in each configuration.

15 design parameters were considered

size variables: dwellings per block; dwellings per entrance; storeys per block; storeys per dwelling;
circulation variables:
overhead walkways; interconnecting exits; vertical routes; corridor type;

entrance characteristics:
entrance position (facing public street); entrance type (communal only); building on stilts or above garages;

features of *grounds*:
spatial organisation (single-block or semi-public multi-block); blocks in site; access points, play areas.

Embedded within these design characteristics are the interactional personal, communal and social aspects: surveillability, accessibility, and territoriality.

Coleman evaluated 729 blocks of flats (carter street division, southwark) and using 1980 crime figures, showed that burglary, juvenile arrests, theft, criminal damage, bodily harm, sexual assaults and robbery (in that order) increased as the disadvantagement score increased.

h   Soft Architecture

* *Decorating* and adorning public and private places (stations, walls of buildings, boarding around building sites or vacant sites, urban squares etc, *and graffiti wall*s) can involve the local community, local artists, local school-children and adolescents. They are less likely to foul their own water.

Decoration and personalisation are forms of place attachment, and are used as an extension to (or symbol of) an individual's sense of identity (Cooper, 1976; Tuan, 1980), or home exterior decorations can symbolise membership of a group, community or neighbourhood (Taylor et al, 1976), or both individuality and communality (Altman and Gauvain, 1981). Greenbaum and Greenbaum (1981) found that exterior home decorations on houses and in yards were

indicators of long-term residence and strong social ties to the neighbourhood; and Beck and Teasdale (1978) found that neighbours often initiated their contacts with other residents when attending to their yard personalisations.

Individual and cultural influences will result in a uniqueness in the use of decorating symbols, and Brown and Werner sought to overcome this constraint by assessing *holiday decorating* at periods such as Christmas and Halloween, which are commonly defined cultural events. Furthermore, they are transient indicators and, as such, important, since permanent decorations may have been the work of previous tenants. They found that respondents of decorated homes knew more neighbours, identified more with their block, had more favourable attitudes to the block, and reported a greater sense of security and community than residents in non-decorated homes.

* Graffiti can also serve as territorial markers (Ley & Cybriwsky, 1972)

* Rapoport (1982) mentions that bare earth is an environmental cue which will tend to be decoded as indicating an area of low quality and low caring. Compare this with images of tree-lined streets, with cared-for gardens.

* Urban village and village green notions *vs.* institutional architecture (hard surfaces, imposing forms, inhuman scale, long corridors, impersonal entrances, concrete barriers, faceless facades & flat concrete roofs); and *vs*. Corb's Radiant City type developments, with kilometre of high buildings standing on stilts and divided up by broad motorways, giant urban squares, extensive parks and grounds, huge schools, big shopping precincts with acres of parking, etc.

* The more articulated a facade, the more likely are residents to add their own personal signs to the design (Cooper Marcus & Sarkissien, 1986). Similarly, every unit should have a balcony (or front porch, where appropriate), so that some contact with the outdoors is always possible, toddlers can play in security, and the elderly sit in comfort and watch things happen.

i Soft Architecture and Community Spirit

Partnerships between planners, artists and urban communities can reclaim streets for the community. Kath Walters (1992) reports on several recent and successful partnerships in Australian cities, where public space has been acculturated and appropriated.

In Adelaide, the Pinda Street Mural Group was formed, which enlisted the help of artists, and professionals experienced in developing community projects, and the Community Arts Network, and liaised with the local council and the local community. The idea was to paint a mural on the wall of a large factory which dominated the area. The project quickly caught the imagination of the locals, who turned up to help and also brought with them photos and other memorabilia, images of which were included in the mural. The mural, some 200 meters long, has transformed the area physically and socially, brought neighbours together, and, although graffiti is widespread throughout the Kilkenny/West Croydon area, the mural has remained untouched.

Other examples are of a cultural mapping exercise, initiated by Community Arts Marrickville, where multiple local ethnic groups worked with artists and translators to produce artifacts based on their personal experiences of the shire. This not only brought together the different groups, but showed them each other's visions of the area; and culminated in an exhibition of the cultural maps. This 'rich bank of imagery will also form the basis of many artworks to be installed within the fabric of the physical environment, in new footpaths and walls'. As a result of its strengthened links with the locals, Community Arts Marrickville has been able to persuade the council to undertake broader consultation about the Newtown Bridge redevelopment, and the reshaping of the area around Newtown Railway. In similar vein, a unique playground, with a path mural, has been created working with local children and their parents in St Francis Street, Newtown.

Yet other projects are the Kalamunda Stained Glass project in Perth, where residents and local artists created a wall of stained glass for the local library; and in Melbourne, where the Springvale council has embarked on a 15-year project, recreating bushland. Integrated within Springfield council has embarked on a 15-year project with the community to recreate urban bushland in the shire. Integrated in the project is a cultural plan including designs for public open spaces, railway stations, malls, streets, paths, street furniture, sculptures and fountains.

The final example is of a mural on the corner of Everleigh and Caroline Streets, Redfern, now in its third year of display. Mick Mundine, Secretary of the Aboriginal Housing Company said: "The mural was painted to change the image of the place, to bring a bit of love and unity to the place". The design itself was determined from the community through questionnaires, and two aboriginal artists from Skillshare painted the mural. Sydney City Council has plans for another mural along a wall near the railway tracks. And the Community Development Project (CDP) which has been recently introduced, aims to contribute to a better community environment, by providing employment for young aboriginal people in Redfern, and by starting community run facilities, all of which, it is believed, will increase

community involvement and committment to maintaining the quality of the physical and social environments - and thereby change the nature of the situational environment.

9.0   CONCLUSION:

A Defensible Territory is an environment in which in-built environmental and situational cues (access control, natural observation, animated spaces, territorial markers etc) and the latent sense of community (via participation and involvement) are translated into a sense of responsibility and security on the part of the users/residents/occupants etc and a corresponding sense of apprehension on the part of the potential criminal - rather than the reverse.

The potential criminal or delinquent perceives such a space as controlled by its residents, leaving him an intruder easily recognised and likely to be apprehended.

Deterrence and prevention are the techniques suggested, rather then having to rely on heavy policing, and recourse to the criminal justice system, punishment, jail sentences, and building more and more jails.

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