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Afterdark Design, Night Animation & Interpersonal Interaction: Towards a Community-Security Paradigm

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Introduction

Crime Prevention Through Environmental Design (or CPTED) is a misnomer. Design alone cannot prevent or cause crime; but can enhance or diminish opportunity potential in the built environment, and thus influence the extent to which criminal acts are more or less likely to occur. Moreover, the focus on crime prevention, however germane, is unfortunate. Issues other than crime *per se* are also of fundamental importance, specifically: the experience of fear and of non-criminal, frequently *un*reported harassment. And, crucially, the central roles which community groups and responsible individuals interacting in the public realm play in creating safe-places is not acknowledged in the CPTED nomenclature. There is little recognition of the significant disparity between the experience of places during the day and afterdark.

This paper addresses these issues, evaluating the effectiveness of a community-security approach in reducing crime, with a critical analysis of afterdark design, night animation and interpersonal interaction as key components. The construct linking these factors is an attitude which assumes responsibility for places, and emerges as congruent spatial behaviour.

The Community-Security paradigm proposed here as a strategy in the generation of habitable (thus safe) and socially sustainable urban environments has as its antithesis the realm of the dormant domain – isolating and ambiguous public open spaces, alienating parks, blind carparks, silent suburbs and shopping malls, railway stations and city centres deserted at night. The approach involves a range of spatial design and place management issues, all of which are mutually interdependent. Afterdark design and night animation are specific co-existing elements within a culture of community responsibility for places (not forgetting that a community is a congregation of like-minded individuals) - the generic source of safe and sane interaction. This eclectic notion involves human factors such as: community participation, appropriation and territorialisation of the public realm, streets-for-people, personalisation of private places, access control, and interpersonal interactivity between local users and municipal, housing and policing representatives. Equally implicated: land-use activities mixed in both space and time, urban but humane-scaled neighbourhoods, pedestrian-prioritisation and in-built surveillability potential, lighting, and line-of-sight syntax applied to street and node (intersection) configurations - the design parameters.

The salience of community security is a theme that has resonated over the past half century, including but in no way restricted to the concepts: eyes on the street (Jacobs, 1961); communities of interest (Newman, 1980); policing at community scale (Willmott, 1987); human territorial functioning (Taylor, 1988); communities and crime (Hope and Shaw, 1988); neighbourhood cohesion (Buckner, 1988); resourcing local residents and long term cooperative consultation (Joseph Rowntree Foundation, 1995); attraction to neighbourhood and perceptions of safety (Vinson, 1999); successful community safety (ICPC, 1999); officer next door (HUD, 2004); community consultation and strategic partnerships in combination with CPTED principles (Safer Places, Home Office, 2004); and social intervention empowered by

interpersonal interaction (Samuels and Judd *et al*, AHURI, forthcoming).[1] Enhancing community interaction is a 'no regrets' strategy.

The Afterdark Rationale

The afterdark rationale recognises that an individual or community assuming responsibility for a place generates a sense of territoriality, which encourages frequent use by like-minded people, in particular afterdark - essential ingredients in the emergence of the *un*selfconscious natural policing which underpins safe-places.

Afterdark *design* embodies opportunities for natural surveillability and incorporates 'soft architecture' into the setting. Inevitably, visibility implicates both privacy and surveillability. The ability to see out from private space and observe activities occurring in non-private space at night needs to be balanced with privacy preferences *ie* controlling the ability of outsiders to see into an illuminated space. Afterdark *management* organises the night-animation domain - providing the opportunity for community-appropriate activities and community-policing to naturally occur in congruent mixed-use zones.

The rationale for focusing on afterdark rather than daylight socio-spatial experience derives from both attitudinal and behavioural evidence. Fear of crime, harassment and offences against people have a greater tendency to occur during the dark hours, when in-built surveillability opportunities are significantly lower, people feel more vulnerable and isolated and act less confidently, there is less chance of a victim being able to identify an aggressor later, escape is easier, and other people are less likely to be present to act as potential deterrents or even to intervene. Empirical evidence (from Australian studies) of intense levels of harassment and crime 'against the person' at night - can be found in national crime victim surveys, customer perception surveys on trains and reported events at railway stations, as well as on campuses and in a suburban residential domain (see: Braithwaite & Biles, 1980, CityRail Commercial, 1994, Jochleson, 1994, and Samuels 1995a & b, *inter alia*). More recent research, focused on areas of concentrated public housing, indicates a general equivalence between night and day victimisation experiences. These areas are criminogenic in the first instance, due to an unfortunate coincidence of social disadvantage and spatially-estranging configurations. In other words, the characteristic high prevalence of both recurrent and endemic crime seems to override temporal distinctiveness in these situations (Samuels *et al*, forthcoming).

A Canadian finding that 90% of women restrict their activities for self-protection is salient (Trench *et al*, 1991). The AHURI research indicates pervasive and spatially extensive fear afterdark in each of the study areas. It would seem reasonable to assume that a considerable proportion of 'avoidance behaviour' would occur at night. If people are afraid to go out afterdark, or women are afraid to use trains at night (Aungles *et al*, 1994), the consequences of such avoidance behaviour are to multiply the risk for those who do venture out, and to influence the general ambience of a

[1] The AHURI (Australian Housing and Urban Research Institute) research cited here utilises crime data provided by three Police Services, which approve the publication of anonymous and ethically appropriate research findings. All spatial identifiers have been coded or removed, and no individual, community, agency or State is identifiable.

neighbourhood or urban domain or transportation facility. It sets a certain negative tone. It is probably true to say that architects do not imagine the buildings they design as changing their 'personality' at night; possibly urban designers are more conscious of the temporal nature of the settings they generate. If, however, the focus of attention was on designing for the most vulnerable time of day and most vulnerable members of a population, a high degree of crime-prevention potential would automatically be built-in, to the benefit of all users at all times. Indeed, 'urban renaissance' case studies from the UK indicate the crime-reducing efficacy of intensive daytime and afterdark activities in communal areas, and of high levels of pedestrian permeability (Safer Places, 2004).

Community Participation and Appropriation of Place

Community involvement has the potential to send a symbolic message to potential offenders that a place is 'owned'. This is a form of community empowerment or territorial appropriation, yet the salience of territoriality is often overlooked by security managers and environmental designers and the role of the users of facilities is infrequently capitalised upon. Communities, however, are *the* central component of all security systems.

The participation of community stakeholders is necessary at several stages of a development. First, they need to be given the opportunity to voice their priorities and preferences at the pre-design phase; then be intimately included at interpersonal level in the management of places and have opportunities to imprint the built environment with their own personal, historical and culturally meaningful symbols and territorial markers; and, finally, be asked to assess the effectiveness of security systems after their deployment and to evaluate their own sense of security at different times of the day and night – the post occupancy evaluation (POE) phase. In these ways the expectations, experiences and evaluations of the community can be elicited, and their empowerment engendered. In combination with the expertise of security managers, people-place considerations by sensitive environmental designers, strategic interagency-community relationships and empathetic interpersonal interaction the probability of ending up with safe-places should be enhanced. This community is, of course, a community of interest (Newman, 1980): like-minded individuals. It is irrelevant whether they are public housing tenants or owner-occupiers in a residential setting, employees in commercial or industrial or government premises, students in universities, or passengers on public transport. Once they are empowered to engage in the debate they more readily become stakeholders and can begin to develop a sense of attachment, a proprietary attitude: responsibility for places.

Community involvement is thus achieved by allowing the process to be inclusive rather than exclusive (or elitist). Risk managers and project managers, however, often expound the 'need to know' dictum, and architects and planners and above all developers are not renown for their commitment to community participation in design. Expertise then dominates experience, inevitably failing to appreciate the complicated array of socio-spatial and cultural conceptions which the design of complex settings necessitates. Where people are empowered, on the other hand, natural policing is likely to emerge – since there is an innate tendency in the human psyche to territorialise. It is not the police but communities of like-minded individuals who maintain the peace.

Personalisation has long been recognised as a form of place attachment, and is symbolic of a sense of identity, or membership of a group, community or neighbourhood (Altman, 1975, Taylor *et al*, 1981, Greenbaum & Greenbaum, 1981, Rapoport, 1982 and Cooper Marcus & Sarkissian, 1986; *inter alia*). 'Soft architecture' implies just such a process: the local community invited to embellish public places or buildings or paths with territorial markers - in the form of murals, paving, sculpture, landscaping - even graffiti street-art walls (McMurray, 1987; McNulty, 1990; McIvor, 1990). This soft architecture approach is in contradistinction to the deterministic fortress approach whereby the setting is target hardened. Hard architecture focuses inappropriately on physical solutions, depersonalises a place and sends out the wrong messages - increasing fearfulness amongst the community of users (who avoid being there) and seemingly challenging adolescents to defiantly trash a place. 'Soft management' is of a similar ilk to soft design. Here community representatives undertake management roles in collaboration with security managers or housing managers (Perlgut, 1982); or individuals respond to empathetic interaction with them. This heightens the probability that a sense of responsibility for the community or spirit of a place will emerge, and that the prevalence of crime and harassment will fall (Samuels *et al*, *op.cit*).

The security POE which represents the final phase in the community participation process can take three basic forms. First, an analysis of user experience and satisfaction (day and night) where fear maps, victimisation maps and safety maps are drawn, and comparatively analysed (Samuels, 1995b; Samuels *et al, op.cit).* Second, there is the safety audit, where community representatives are invited to accompany security experts or CPTED-trained police officers on a walk-through of a neighbourhood or building, and to record their impressions of safety or security potential. The third approach is local area crime mapping (see Devery, 1992; Homel & Tomsen, 1992; Samuels, 1995a; Samuels *et al, op cit.*). Here offence records (frequency and location of crime) and demographic data are synthesised and mapped, highlighting 'hot spots' spatially over time. Empirical evidence drawn from mapping evaluations can then be correlated with policy and/or design.[2]

Night Animation and Afterdark Design Synthesis

Natural policing is the essential ingredient in night animation domains. Afterdark activity in the public realm as a community-participation response necessarily implies that these transactions are organised to be functionally congruent as well as juxtaposed physically in space. Appropriate activities can be defined by those functions that should be *excluded* (negative attractors: pubs and clubs, for instance) while the many activities which could harmoniously co-exist include, by definition, those which are comfortably exercised late into the night or even through the night. Streets-for-people (a seminal idea illuminated by Jane Jacobs, 1961 and Bernard Rudofsky, 1969; see also: Mumford, 1961/91 and Morris, 1994; *inter alia*) appears to be a central requirement of such socio-spatial configurations: pedestrian-prioritised, mixed land-use and humane-scaled domains energised by dynamic activity-sets and situational contingencies not dissimilar to those still evident in 'old-city' centres today - Paris, Barcelona, Copenhagen, Rome, Prague *inter alia.*

[2] See: 'Methodological Advances', later.

Fig. 1: Pedestrian Urban Square, Copenhagen; Streets for People, Barcelona
(photos: author)

The salience of night animation and afterdark design needs to be set against the wide-spread and unfortunate myth in reductionist CPTED approaches that physical surveillability opportunities necessarily lead to crime prevention. Even if windows overlook the public domain, people do not generally look out and purposefully scrutinise what is happening there, particularly at night when they can be easily seen from the street. At best, an onlooker observing an incident might alert the police, but would be unlikely to personally intervene in an attempt to prevent a crime happening.[3] Rather, it is the nature and quality of the activity actually happening in the public realm that is the crucial element: how territorially integrated and responsible the community (of individual people) feel in these non-private domains which influences how they are experienced, and how safe they are.

In the night animation time-cycle, when afterdark activities are terminated or reduced, security must be proportionately increased and accessibility proportionately decreased. This demands a broad inter-agency partnership approach. When/if sufficient places are thus animated at night, the displacement of criminal and anti-social activities should become further and further away from populated centres, until, hypothetically, only the most motivated or pathological individual should be expected to continue to seek a place to act out criminal or anti-social intent.

From an environmental-design point of view, night domains need to be extremely carefully illuminated. Stollard (1991) reports that some 40% of night-time street crime tends to occur when lighting levels are at 5 lux or less, while only 3% occurs when lighting is above 20 lux. He also confirms the quality of lighting as vital, for instance that faces are lit up at relatively close range. CCTV systems of course rely on an adequate amount of light to function. It is salient to note that street lighting often emits little illuminance at ground level; this can be as low as 1 lux (measured by the author): there is light but not illuminance. A false impression of security can thus be created. In a study conducted by the Centre for Criminology and Police Studies the lighting along roads and paths in Edmonton Green in London was replaced, ensuring an average illuminance of 10 lux. Six weeks later, 85% of people interviewed before and after the changes reported a drop in their fear of crime, and actual crime dropped from 21 incidents to just three (Building Today, Feb 1991:11).

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[3] See: Latane & Darley, 1969 on 'bystander apathy'; Hackler *et al*, 1973 on 'willingness to intervene'; Huston *et al*, 1981 on 'bystander intervention'; and Friedman *et al*, 1982 on 'victims and helpers'.

The night-light relationship is the best understood element of the afterdark paradigm, but even here a subtle mix of illumination levels is required to accommodate the ambience or mood of different places. Appropriate lighting in the public domain is not accomplished through flooding places with light, nor should it cast deep shadows, or be filtered through foliage. Furthermore, paths and the edges of open spaces must be adequately lit and nowhere should users be isolated in a pool of light within a dark context. Without fail, lighting systems must be vandal resistant, and be maintained with monotonous regularity.

Of special interest to the afterdark rationale is the functional significance of clear sightlines. The value of being able to see ahead, and discern who might also be on a path or in a place before encountering them, as well as limiting the opportunity for individuals to conceal themselves or to surprise unwitting users, is a powerful, in-built, situational deterrent.

Designing or ameliorating a sightline component is complex since the ecological nature of places is frequently implicated. Balancing trees and vegetation and urban structure is a delicate task. Design resolutions could include the creation of 'sightline nodes', where movement paths intersect and lines-of-sight change direction. If such nodal points are convex in shape, anyone standing at any point on the perimeter or entering the area from any path should be able to see anyone else there. The spatial syntax incorporates opportunity potential.

Inevitably, one factor vital to the success of community-policed places is the degree of integration or separation of their activities and functions. For millennia before the 'modernists' distorted urban development with a 1930s separation-of-activity mantra (enshrined in their Athens Charter) cities were integrated places. It is now known, for instance, that commercial stores set back from the street or shielded from public view and sparsely used streets adjacent to commercial districts are crime prone (Conklin, 1972; Fenney & Weir, 1974). Such areas become dormant afterdark. And the legacy of the Radburn design popularised in the USA early in the 20th century is still plaguing us today. Unfortunately many public housing domains were spuriously designed around these principles: back-to-front housing and rear lane access.

Fig. 2: Radburn-design public housing estates, Australia (photos: author)

By the 1960s Jane Jacobs had astutely 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. Much modern urban

design reflects an addiction to massive high-rise signature buildings, residential or commercial notwithstanding, and very high density centralised CBDs, with peripheral specialised industrial parks and low density, far-flung and homogenised suburban housing tracts separated from everything else by so-called green belts. Happily, in the wake of the drive towards consolidation and compactness as ecological sustainability components,[4] some contemporary designers appear to be returning to the urban-village and old-city paradigms - where people live and work in humane-scaled, pedestrianised and integrated urban settings. The greening of the city notion is a 21st century socio-ecologic model of great significance, which has the unique potential to generate both habitable and sustainable environments. Places that are experienced positively will be used – and security flows naturally from that.

Methodological Advances, and some Pertinent Field Study Findings

In order to assess the community security paradigm, two field studies were undertaken (in Sydney: Samuels, 1995a & b), which also set the scene for the AHURI research. Multi-dimensional techniques were developed and applied to elicit qualitative performance expectations and situational experiences. They included:

- A POE Safety Audit: a user-experience questionnaire which tapped into the situational experiences of respondents, specifically relating to their sensation of insecurity - where, when and how often.
- An Environmental Experience Evaluation: assessing the level of congruity or 'environmental fit' between the expectations of an individual and their actual (phenomenological) experience in the environment (Van Harrison, 1978, Baillie *et al*, 1987, Samuels & Ballinger, 1989). Here, Importance and Satisfaction scales are correlated (see Fig. 4).
- Situational Experience Mapping: adding a temporal day/night dimension and a fear-scale to previous fear-mapping techniques (Merry, 1981). Here, respondents indicated on a map the places where and when they felt safe or insecure, and if they had had a victimisation experience, where, when and how often that occurred.

  Victimisation surveys have been carried out with great efficacy previously (The British Crime Surveys, for instance). In particular, micro-victimisation surveys have exposed patterns previously masked in large scale surveys (Painter, 1992). Victimisation mapping locates incidents of both crime and harassment spatially and temporally, and permits reflection on the large amount of crime and harassment that goes unreported.
- Crime Mapping completes the picture. Sophisticated GIS software was employed in the AHURI research, based on longitudinal crime data and trends. This permits critical and comparative analyses with strategic social and/or spatial intervention policies, allowing for an evaluation of their efficacy in reducing crime (Samuels *et al, op.cit*).

Briefly, then, some pertinent findings, first: related to fear and dissatisfaction afterdark. From the 1995 neighbourhood study it emerged that almost three quarters of those who felt unsafe in their neighbourhood had this experience at night.

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[4] *ie* conserving natural resources, and by reducing vehicular movement both improving air quality and reducing global warming emissions.

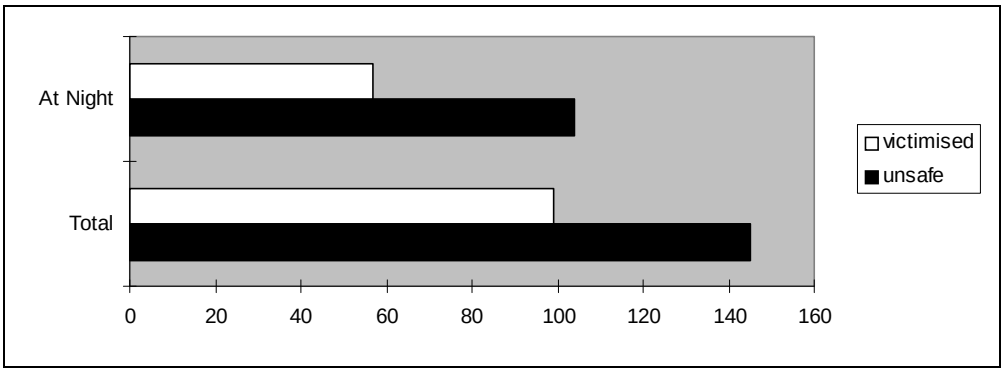

Fig. 3: Respondents Feeling Unsafe & Victimised at Night, and Total (*ie* day and night)
Source: (Samuels 1995, *Design and Planning for Urban Safety and Security*)

The 1995 survey of university students living on campus indicated that 58% of *fear* or insecurity feelings occurred at night with a further 33% at week-ends - when few people are around. These low animation situations together accounted for almost all fear votes. Generalising for all five campuses surveyed, 85% of the fear-votes were from women respondents. Other campus research substantiates these findings (Klodawsky and Lundy, 1994; *inter alia*). Environmental fit analyses (Fig. 4) indicated a significant degree of misfit between the high expectations associated with appropriate lighting on College access paths/roads and in parking areas (+3 on the Importance scale), and high Dissatisfaction with its provision in practice.

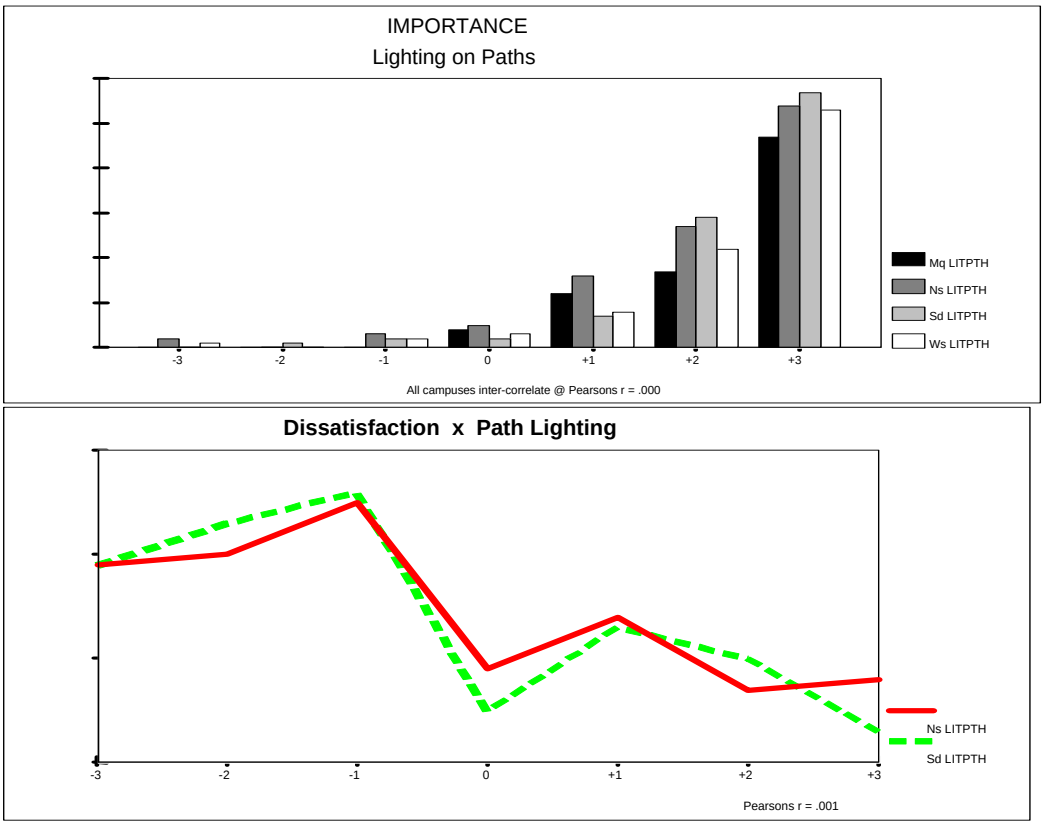

Fig 4: Lighting on Paths: Importance and Dissatisfaction
Source: (Samuels, 1995, *Defensible Design and Security - University Campuses)*
(Note: Sd, Mq etc are designations for the different universities)

Finally, the AHURI research (forthcoming) spatially mapped almost 60,000 geo-coded crime incidents over 5-years in nine areas of public housing concentration in three States of Australia. This allowed for the generation of hotspot crime maps at both micro-urban scale (Fig 5) and area-wide mapping, which revealed a public housing clustering phenomenon recurring consistently in all nine areas.

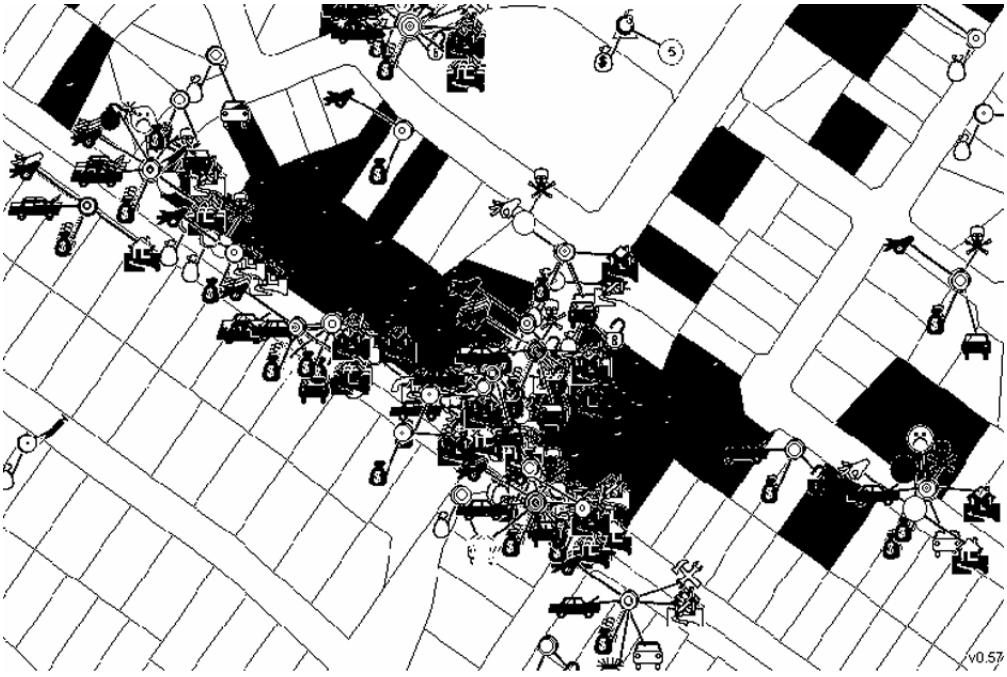

Fig.5: Generic Hotspot Cluster of Concentrated Crime

Source: (Samuels, Judd, O'Brien and Barton, forthcoming)
Legend: black = public housing; white = private housing; icons relate to crime types

Comparative analyses relating a 'crime *expectation* indicator'[5] and intervention strategies confirmed that effective approaches to crime reduction include a community partnership and inter-agency or whole-of-government approach (Osborn and Shaftoe, 1995). In the two communities where longitudinal crime trends are falling, an intense social intervention approach is in place *and* empathetic inter-personal relationships are commonplace between residents, CPTED-aware crime prevention officers practicing an 'open doors' policy and local or 'user-friendly' housing managers. Proactive 'police-elder-younger' interaction is a pertinent case in point. This is of a similar genre to the community-based mentoring by 'Big Brothers and Big Sisters' found to be effective by Tierney and Grossman, (1995), and HUD's 'Officer and Teacher Next Door' program - aimed at strengthening distressed communities by encouraging police and teachers to live there – where dense clusters of resident police and teachers are associated with reductions in crime (HUD.org/2004).

[5] the *probability of experiencing* crime – derived from spatially integrating population size and annual crime prevalence (in each area).

Risk Perception and Community Participation

It is well recognised in the literature on risk perception that a statistically minimal risk, if *perceived* as potentially threatening, may generate anxieties that are no less real than the actual experience of such a situation (Lee, 1981). Neuro-endocrine secretions and psycho-somatic responses are known to be associated with thoughts and feelings (anticipation of events, for instance, or fear) equally as with the actual experiences themselves (Selye, 1956). If these psychological constructs and situational interpretations actually influence interaction (result in avoidance behaviour) the ambience and safety of a setting can be radically changed for the worse. On the other hand, 'active involvement results in the risk being perceived as lower than if participation were passive' (Fried, 1970). These are trenchant arguments for community involvement as a potent place-appropriating force. Where individuals or communities become involved in the decision-making or control process, they are less likely to attribute blame, and should be more likely to take responsibility for their own security or risk minimisation. There is also recognition of the wide divergence in risk assessments made by experts and the subjective risk perceptions of lay users (Otway *et al*, 1978; Lee, 1981).

Thus, becoming preoccupied with the technical means of reducing risk (CCTV, or target hardening or physical removal of opportunity potential from the situation) or relying on CPTED-expertise, and ignoring user experience unwittingly denies the natural advantage inherent in all individuals and communities of individuals to take responsibility for, protect and, if needs be, defend their property and person. The community-security socio-spatial paradigm discussed here intrinsically appreciates and recognises community involvement and individual sense of responsibility for place as necessary elements. Environmental design and management are the in-built elements, the situational potentials. Attitudes related to place-attachment emerge from the nature of community and interpersonal interactions (whether people feel socially excluded or empathetically included) and represent the potential for achieving safe-places. Ultimately the spatial experiences of places affects the extent to which they are naturally or unselfconsciously policed. Simultaneously, criminally-intent people act rationally: if they detect a strong sense of community like-mindedness the likelihood of them seeking targets or victims there will decrease proportionally.

This eclectic and socio-psychological model of crime reduction extends the CPTED paradigm beyond its standard envelope. From this eco-logical perspective people relate in social space infused with built-in environmental cues. Theoretically, a community-security paradigm posits that where social exclusion is countered and self-esteem is heightened by empathetic interactive partnerships leading to a heightened sense of territorial responsibility - particularly where this takes place in integrated mixed-use spatial settings designed to foster like-minded communal activities and inhibit criminal opportunity (day and night) - sustainable communities are more likely to emerge.

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