

# **Samuels, R. (1993), Defensible Design and University Campuses: A Review, Proceedings of the 'Crime Prevention Strategies for the 90's Conference'**

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## **ABSTRACT**

Defensibility as an issue in urban and housing design and management has been evaluated in many countries over many years but the issue of safety/security on university campuses has scarcely been addressed. Universities, however, occupy vast tracts of land in all major cities, have tens-of-thousands of people using their campuses daily, and also house large numbers of students on-campus, who are on campus after dark. It is imperative that they are designed and planned to be 'safe-places'.

This paper reports on the background research for a major study (beginning July 1993 <sup>1</sup>) which will evaluate the defensibility potentials and the epidemiological patterns (frequency of occurrence and spatial distribution) of crimes (particularly crimes against persons) on 5 university campuses in Sydney.

Campus safety issues reviewed include: underestimation of the extent of the problem, and under-reporting - based on evidence from American research, victims are reluctant to report assaults and sexual harassment; place-avoidance behaviour and the geography of fear - areas in which crimes occur are not necessarily areas which people associate with crime or perceive as dangerous; and the design, planning and management of *residential* areas on campus - again, American research indicates that assaults on campus are more likely to occur in student residential neighbourhoods, and *en route* to these places.

Policy cannot be 'informed' and appropriate action (design and managerial) cannot be undertaken where 'human' issues are not taken into account, issues such as women's reluctance to admit to experiences of sexual harassment, or men's apparent reluctance to admit to fear.

## **Research Background**

The theoretical paradigm underlying this research derives from an understanding that physical determinism is an inadequate explanation for spatial behaviour. The alternative model proposed here recognises that spatial cues and design can *limit or encourage* the acting out of certain behaviours perceived as being appropriate in certain places i.e. that opportunity potentials (situational inducements) can be created by design. However, whether or not an individual decides to act on these perceived potentials will depend on their personal proclivities and history. If their socio-cultural environment, past experiences and/or genetic inheritance have

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<sup>1</sup>Defensible Design and Security: *University Campuses (DUC)* / Samuels / SOLARCH.

created a certain vulnerability or tendency to act in anti-social or criminal ways, **and** the appropriate situational opportunity exists, the likelihood of a crime being committed is then considered to be high.

In sum, personalities susceptible to marginal imagery interacting in potentially marginal settings are more likely to behave in marginal ways.

Defensibility as an issue in urban and housing design and management has been evaluated in many countries over many years (...from Jane Jacobs in the 60's, to Alice Coleman in the 80's and Karen Franck in the 90's...) but the issue of security on university campuses has scarcely been addressed. Universities, however, occupy vast tracts of land in all major cities, have tens-of-thousands of people using their campuses daily, and also house large numbers of students on-campus, who use the campus after-hours. Given the nature of a university campus, the area tends to become rapidly depopulated after 5pm and after 7pm is likely to be more or less deserted. The on-campus residential *domains* are similar in many ways to medium and high density housing in urban neighbourhoods, and similar environmental design and situational strategies are applicable to both. It is imperative that campuses in general, and their residential components specifically, are designed, planned, managed *and* perceived as 'safe-places'.

There is also a large amount of expensive equipment on site and crimes involving property make up the vast majority of offences recorded on-campus. Due primarily to the difficulty of distinguishing potential offenders (and student offenders) from legitimate students, on-campus theft deterrence becomes largely an issue of the securing and locking of buildings, student residences, staff offices, computer labs, bikes etc, and the regular patrolling by security staff after-hours. Conspicuous electronic surveillance of car parks, bike racks and inside libraries could also act as a deterrent. Nonetheless, only commonsense can prevent the theft of wallets, not environmental design. The issue of theft on campus will not be a focus of the *DUC* research.

### **Empirical Issues Requiring Investigation**

Issues requiring evaluation relate to the major aspects of defensibility, including: the incidence of crimes committed and/or reported on campus; the geography of fear or perceptions of safe-places, and place-avoidance behavioural responses; the design of buildings and the planning of campus domains ; campus image; socio-economic nature of adjacent neighbourhoods; university community appropriation and policing; grievance management; and on-site security systems. **Underestimation of extent of problem, and under-reporting:**

University authorities are aware that criminal activities are perpetrated on their campuses and are attempting to ameliorate the problem, for instance, by increasing security patrols and providing on-campus security buses. <sup>2</sup> However, their major concern <sup>3</sup> seems to be

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<sup>2</sup>The University of Queensland introduced a Unisafe project on their campus in March, 1992, after a number of rapes and attacks occurred on the campus. One technique employed is

occupational health and fire safety. Millions of dollars are spent each year upgrading and refurbishing for workplace safety and health (Focus/UNSW, 13 December, 1991).

Based on evidence from American research, it is likely that the extent of the personal security problem on campuses has been underestimated, due to the reluctance of victims to report assaults and sexual harassment (Lott et al, 1982; Brandenburg, 1982; Everywoman's Center, 1979).

Brandenburg (1982:324): "A low number of official complaints at a university may reflect a relatively rare incidence of sexual harassment - or students' anxiety about voicing charges, particularly in the absence of an established grievance procedure...The seriousness of the issue cannot be measured by numbers of complaints".

The Lott, Reilly & Howard study (1982) of students and staff on the three Rhode Island University campuses indicated that 55 cases of serious sexual assault were experienced by respondents, but that only 7% of cases were reported to the police. "This figure suggests that allegations of assault known to the police or university administration should be multiplied by *fourteen* in order to get a true estimate of the incidence of sexual assault at the University within the past few years". According to the Rape Crisis Center in Urbana, Illinois as many as 70% of rapes may go unreported (Kirk, 1988).

The *Ms.* magazine study (Warshaw, 1988) found that date and acquaintance rape victims were reluctant to report these incidents (5% reported the event, 42% told no-one at all about it). This was partially because of their reluctance to become involved with the police (and/or University Judicial Boards), or to submit to medical scrutiny, which is required as evidence, and partially because of the confusions surrounding male and female dating expectations and experiences (see: Attitudes and Perceptions, below).

The results of a recent study of Australian campuses, undertaken at the University of New England-Armidale, and released in June 1993 (Campus Review, 1993) suggests that of the 2,482 crimes reported on campuses nationwide during 1992, 7% were offences against persons. This figure includes: homicides, sexual assaults and rapes, physical assaults, homophobic and racial violence, and robbery. The operative issue, and obvious constraint on relying on the UNE results, is that they relate to *reported* crimes. Of these person-directed crimes, only one was a reported rape, 30 were sexual assaults, and 64 were physical assaults. This is interesting in the light of the information reported in Melbourne University's *UniNEWS* (Campus Review, *ibid*), where 52 *complaints* of sexual harassment were brought by students, staff and even three outsiders, in 1992. This figure alone is higher than the recorded rates for the entire country

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the use of student volunteers, who accompany people to/from on-campus locations from nightfall to midnight.

<sup>3</sup>Other than the protection of property and equipment (eg. via security card entry to buildings, etc).

quoted in the UNE study. Only 8 of these events went to formal complaint (and presumably were reported ?), a further 10 resulted in conciliation, and the rest sought some form of therapeutic help i.e. two thirds chose to deal with the matter themselves.

Clearly, reported or recorded rates give a distorted picture of the real situation, on the ground.

Australian Institute of Criminology research in 1987 indicated that for every 1,000 crimes committed, only 400 are reported to the police and 320 are officially recorded as offences. 43 people are convicted i.e about 4% (SMH, Jan 21, 1992)

1000 crimes were reported in 1990 (compared to 800 in 1989) on the Sydney University Camperdown campus (SMH, Aug 16, 1991) of which 900 involved property, the rest being crimes against persons. Situational factors associated with its location amongst "low socio-economic areas" and the fact of the campus being "wide open" were cited as possible reasons for the comparatively high rates reported there. Extrapolating from the American studies, even these high rates are likely to be underestimates.

About 400 crimes were recorded in both 1990 and 1991 on the University of New South Wales campus, of which 4 and 5, respectively, were (non-sexual) assaults. 5 assaults were reported in 1993, although Unibeat - a recent 'crime awareness newsletter' which has appeared on campus in the past two years - says, "we know there were some unreported incidents". Security officers at UNSW claim that no cases of sexual harassment have occurred on the UNSW campus during the past few years. However, at least one woman student taking a course given by the author knows of a case of attempted rape, unreported, at a residential college in 1989, and another rape is said to have occurred in 1992 at one of the Colleges surveyed during the UNSW Pilot Study (discussed later).

It is likely that under-reporting will be evident when campus users are questioned in the forthcoming *DUC* study. An attempt will be made (using various methodologies) to unearth unreported offences, by asking campus users to recount any unreported personal harassment they might have experienced on a campus, and to pinpoint an area where it had occurred. Anecdotal and hearsay evidence relating to the experiences of other people on campus will also be sought; and, of course, anonymity will be guaranteed.

### **Spatial Behaviour, Spatial Distribution and The Geography of Fear**

Areas in which crimes occur are not necessarily areas which people associate with crime. Studies frequently distinguish between myth and reality, and investigators are currently focusing on cognitive issues such as a "sense of insecurity" (Calogirou, 1990) and "bad reputation" (Dulong, 1990; Paperman, 1990) in order to understand spatial behaviour in residential areas.

Kirk (1988) investigated perceptions of safety on the Urbana-Champaign campus of the University of Illinois, and reported that "the areas students felt to be most dangerous were not areas that were statistically the most dangerous"...regarding sexual assaults. An earlier study of

neighbourhood insecurity by Scheppele (1983) reported that "the geography of fear does not necessarily parallel the geography of rape".

Nonetheless, a feeling of insecurity about a place or area has real consequences i.e. people behave differently towards that place. Indeed, a hypothetically *indefensible* place which has low rates of recorded crime is not necessarily a safe-place at all. If people fear a place they tend to avoid it. Thus, the majority of people, women especially, would *avoid* dangerous places, which reduces the likelihood that an attack will occur there. This will account for the lower recorded rates there; however, the ratio of the number of users to the frequency of assaults may actually be higher in these areas perceived as insecure, and thus the perception of danger may indeed be accurate.

Kirk's study indicated that places students mention as being dangerous were those which were underpopulated/deserted, had poor lighting and/or places to hide (thick vegetation and/or architectural design). However, assaults were more likely to occur, in reality, in *student residential neighbourhoods* i.e. where the students live, and *en route* to these places. The *Ms.* study (Warsaw, 1988) mentions that sexual assaults were most likely to happen in isolated places, such as dormitory rooms in college residences and in cars parked outside the residences.

Because of this misconception i.e. that the residential zone is a safe place, people might not be taking the necessary precautions, and hence opening themselves to the heightened possibility of being assaulted in these areas.

Lott et al (1982) reported that 77% of sexual assaults on the three Rhode Island campuses took place near (or in) residence halls, fraternities and sororities. Other areas implicated were parking lots, pub areas and even in academic buildings (10%).

Molumby (1976) investigated patterns of crime at Florida State University's married student housing development, Alumni Village - located some two miles from the campus proper. The main focus of the study was property crimes. Results indicated that 25% of the households questioned had been victimised one or more times during the survey period (15 months). Only 55% of these crimes had been reported to the police. All the buildings in Alumni Village are low rise. The buildings adjacent to the intersection of the major thoroughfares, along the borders of the village (high access/egress opportunities) proved to be the most vulnerable. These buildings also had no buildings directly across from them, which created a surveillability problem. Although these buildings represented only 39% of the apartments in the village, they were responsible for over 65% of all the crime occurrences. A study undertaken by students of the author (in 1991) on the UNSW campus brought to light the perception that one of the least defensible places on the campus was the area around Goldstein College, a student residence. It is one of a group of Colleges (called The Kensington Colleges) clustered on the High St. side of the University. Several gates give unguarded access from High St. to the Colleges and their parking areas, and large trees darken the courtyard around Goldstein College. High St. is a major thoroughfare, is bordered by the Randwick Racecourse, and is lit on one side only (the

racecourse side). There are thus no buildings facing the Colleges on the street side, entrances to the campus are dark, and surveillance opportunities are reduced as a result.

Although the UNSW campus now has a lighted security corridor running its length from the Anzac Parade entrance in the west to the Botany Street gate in the east, the residential Colleges are not on this axis. Routes to the residences from within the campus are dark, and the security bus does not service them.

Extrapolating from the American evidence, all of these elements make on-campus residential areas prime targets for investigation (in the forthcoming research program).

### **Attitudes and Perceptions**

*Ms. magazine* commissioned a study funded by the National Institute for Mental Health (Warshaw, 1988) of over 6000 male and female undergraduates on 32 college campuses across the United States. One of four (or 25%) of the women respondents had had an experience that met the American legal definition of rape or attempted rape ("most of the rapes had happened off campus" p.49). A similar number had been subjected to "sexual coercion", and more than 2,000 (of the 3,187 women) had been subjected to unwanted sexual contact. Moreover, on average, 22.5% of women students at Auburn, St. Cloud, South Dakota and Brown Universities admitted to having been raped, often as a "date rape" (Wolf, 1990) - not necessarily on campus.

Of particular significance was the finding that 84% of the victims knew their attacker, and 57% of the rapes had happened on a date. This issue of acquaintance rape should be of great concern to university authorities, since current liberal policies concerning co-ed college residences are possibly exacerbating this particular variation of sexual victimisation. The issue is partly situational i.e. men and women occupying proximate rooms, the age of the group, the availability of alcohol and drugs...and partly a result of the masculinity mythology which is pervasive in groups of young men (especially those living together) and which conceives of women as objects of conquest. Moreover, there is a great degree of uncertainty where acquaintance rape is concerned: it might have been preceded by some degree of consensual sexual intimacy, there is usually minimal violence, and it revolves, ultimately, around the "degree of resistance" put up by the woman. There is also an ethos in all-male colleges (called fraternities in the USA) that seems to tolerate the idea of gang-rapes at fraternity parties - 50 such incidents were uncovered in a 1985 study (p.105).

30-50% of sexual assailants in the University of Massachusetts and Rhode Island University studies were strangers, thus implicating spatial elements as well as socio-psychological elements i.e. where the victim knows the aggressor. In the latter cases, Lott et al (1982) showed how attitudes were implicated; for example, a proportion of both men and women respondents stated that : "most women who are sexually insulted provoke a man's behaviour by the way they talk, act or dress".

Knowledge of such attitude sets should encourage university administrators to ensure that their educational agendas include exposure to equity and ethical 'attitude appraisal' programs - such

that sexist, racist, ethnic and minority discrimination is confronted. It might well be the case that such attitudes have not been adequately challenged prior to a student entering university life, and that they are held in a non-critical and/or unconscious way.

Similarly, attitudinal programs - not to be confused with the spectre of 'social engineering' - could address two attitude sets which indirectly influence safety on campuses. It is well recognised that women who have been the victims of sexual violation experience feelings of shame (and disgust) i.e. they are literally ashamed by what has happened. The fear of being rejected by possible suitors, or of being accused of complicity, or blamed, or pitied...might place major obstacles in the way of making public the event and/or exposing the perpetrator. A coping response might even involve an individual developing 'amnesia' concerning the event - treating it as if it never occurred. Such responses inadvertently give out a message that it is possible to sexually harass women and get away with it; whereas, in contrast, people are generally aware that if they physically assault anyone they will usually have to answer for that act.

It also seems that adolescent and young adult males consider it inappropriate to admit to feelings of fear or vulnerability. Possibly, the fear of being accused of being a wimp, weak, a coward i.e. not a 'man', is a more powerful motivator than fear itself - despite that fact that fear is an evolutionary strategy which has been vital to our continued survival. Moreover, the fear of being raped is virtually non-existent in the male psyche - although some 10% of victims reported at Rape Crisis Centres in the USA are now males (Warshaw, 1988); and there is probably a further sense of male invulnerability because of a perception (conscious or not, realistic or not) of being 'impenetrable'. The abhorrence of rape is surely associated with *penetration* - the violation, both physically and symbolically, of the sanctity of the self. However unpleasant and offensive the experience of a physical attack may be, it does not seem to have this desecration aspect about it.

As long as males continue to feel ashamed to admit to or express fear, and/or conform to the stereotypical male image, they are unlikely to readily empathise with women's experiences of places, and it should not be surprising if they unconsciously renege on their roles as natural defenders of campus domains, or feel little sense of accountability for the safety and welfare of their more vulnerable peers. Again, the message that is transmitted is: this place is not defended; it thus becomes more offence prone.

A multidimensional solution to the problem will have to take the issues of victimisation and targets into account, given that campuses are likely to be perceived (correctly) by potential offenders as places frequented by thousands of young women - now more than half the intake (SMH, June 16, 93). *Victimisation personalities* and behaviours need to be taken into account, and instruction in both self-defence and self-confidence techniques made available to women students and staff. At the same time, an accessible and approachable grievance/complaint system needs to be enshrined in university charters.

## **Environmental Design Issues**

Architectural design aspects derive from *spatial cues* and latent or built-in *opportunity potentials*. These relate to surveillability or visibility, accessibility or ease of entry and escape, private- public space hierarchy (influencing proprietary attitudes or responsibility for space), clustering (spaces between buildings), targets (land-use), activity patterns, lighting and vegetation, etc (Cloward & Ohlin, 1960; Newman, 1972, 1976a, 1976b; Mayhew et al, 1976; Jeffery, 1977; Taylor et al, 1980; Sarkissian, 1984; Geason & Wilson, 1989...inter alia).

Two general principles underlie the pending Sydney campuses study: Opportunity Potential (OP) and User Characteristics (UC). Within the OP category are surveillability, accessibility and activity; within the UC category are responsibility, susceptibility and demographics. Surveillability itself is further demarcated into issues of visibility; architectural form and cues; lighting; and electronic surveillance. Accessibility encompasses issues of openness and enclosure; access in terms of public/private demarcations, and 'gatekeeping'; street and path design; and boundaries (real and symbolic). Activity is concerned with building type and function; mixed-use zoning; targets; and time-place profiles.

Responsibility is concerned with issues of student, resident and staff participation/representation in university design and management; and individual appropriation - signs of personalisation and territorial markers, and signs of depersonalisation - graffiti and vandalism. Susceptibility relates to past experiences and future expectations; fear mapping; place avoidance behaviour; victimisation; and cue interpretation in settings. If at all possible, actual offenders will be interviewed, in order to get a picture of the campus environment as seen from their perspective. Finally, demographics considers socio-economic status; cultures and sub-cultures of students and residents of surrounding areas; as well as the standard descriptors such as age and gender.

Design, planning and management can also alter the *image* of an area. Campus image refers to the sense of place, or lack of it, emanating from a campus, and which is perceived by users (legitimate and illegitimate) of the campus. Where the design and supervision of an area elicits perceptions of it as a safe-place it will tend to be used. This in itself discourages potential assailants because of the presence of other people, surveillability opportunities, lack of escape routes, presence of electronic surveillance equipment, etc. In other words, both the user's and the potential criminal's perceptions of the area are altered (Carter & Hill, 1979). It is assumed that the sense of appropriation characterising a university community will influence the occurrence of natural policing and intervention rates i.e. the tendency to go to the assistance of victims.

Given that night-time use of the campus represents the period of least defensibility, an application of urban planning principles which encourages a *mix of uses* could help promote a more frequent use of the campus after-hours, for example: a pedestrian network of retail outlets, cafes, a cinema/theatre complex, conference and exhibition venues, sports facilities...all linked with residential domains, and electronically monitored.

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 every action (and thought!). The issue of the extent to which crime is displaced (to other, less scrutinised precincts) is yet to be resolved.

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, i.e. 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. This would make it relatively easy to monitor precincts the size of university campuses, both inside and outside buildings.

### **Pilot Study, UNSW, June 1993**

A student appraisal study was undertaken at UNSW with the dual purpose of raising Architectural students awareness of the principles and issues of defensible environmental design, while teaching building evaluation research methodologies; and to pilot techniques <sup>4</sup> for the major study. <sup>5</sup> Students at several College residences were used as respondents.

A selection of preliminary findings suggests: a strong polarisation in the attitudes of male and female students, with men expressing no fear on campus at night, while the situation is considerably more threatening for the female students, who seem to consider themselves as potential victims and targets. Lighting levels around residences were generally perceived as inadequate, and a mixed-use zone (where a Sports Complex is located adjacent to a residence, and is used after-hours) increased the sense of safety of women residents. An internal courtyard within one residence, with a high degree of visibility and frequency of use, was considered as a safety "oasis", while stairwell and bathroom areas of the same residence were considered to be unsafe by women residents.

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<sup>4</sup>I would like to acknowledge the assistance of the senior students in the course Applied Environmental Psychology, School of Architecture, who undertook the fieldwork under my supervision.

<sup>5</sup>The *DUC* study will utilise a multidimensional methodology, including observation, rating of photographs, questionnaires, interviews, fear mapping, temporal epidemiological data, and a 'phenomenological' write-in regarding unreported harassment experiences.

Interestingly, despite the employment of a 6pm-6am security guard for the three Kensington Colleges, and an in-house security training procedure for students at the College surveyed (Baxter College), there is about one theft per week from student rooms. Management suggested that Neighbourhood Watch programs in surrounding suburbs might be resulting in a displacement of theft crimes to the University residences - which are possibly perceived as soft targets by offenders (given the ease of access and egress, the difficulty of distinguishing offenders from the legitimate residents, and the casual attitudes of many young students to issues of security). Assaults around the Colleges have, however, diminished. Nonetheless, one area, a poorly lit and little trafficked road on the campus-side of the Baxter building was highlighted as an area where male students had been physically assaulted. It should be noted that none of the male respondents in that College expressed any fear about using the campus at night, yet at least a few had been harassed in the vicinity. It was not asked whether these incidents had been reported.

Experiences of respondents at New College residence, of "inappropriate behaviour in the college", was confined to having observed unauthorised strangers wandering around the building - whose presence was often undetected for considerable periods of time, and having property stolen from their rooms. One anecdotal recount went as follows : "A man walked into my room, I was there...he left with no satisfactory reason for being in the college".

Of the 20 respondents interviewed at International House, 7 were aware of cases of physical assault within or around the residence, and 6 knew of verbal abuse incidents. The physical abuse incidents included several drunken brawls near the student bar and in the carpark (unreported), a girl bashed (reported), another assault (unknown if reported), a rape, in 1992 (unknown if reported) and another 'incident', the details of which a female student declined to disclose.

40% of student respondents at New College indicated areas immediately adjacent to, and on paths approaching the residence, as areas they find fearful at night. No breakdown for gender was applied to the data. The composite Fear Map reproduced below relates to the area surrounding the International House residence. The blackened circles indicate places respondents considered as "unsafe" after dark. The high frequency of unsafe places mentioned suggests that this domain is perceived as a high risk area; with, however, a lack of perceived threat around the Sports Centre (used after-hours & also a security shuttle-bus stop).

Source: Student Pilot Evaluation of Residential Security (UNSW Campus), June 1993

Closer examination of the area in question indicates that path lighting (on the west) is at ankle level; open grassed areas are abundant; an unlit path (indicated on the map with an arrow) appears to lead to an entrance to International House, which turns out to be a storage area for the adjacent canteen - unpopulated at night; no signs of appropriation or personalisation are evident; and no surveillance opportunities exist to the rear (east) of the building, which also faces onto the rear of the Metallurgy buildings.

All of these design cues are self-evidently inappropriate, even to the student observer. They contribute, unnecessarily, to a climate of fear, and needlessly multiply opportunity potentials for the occurrence of crimes against persons.

### **Towards...Campus Crime Prevention Strategies**

*Situational-specific* recommendations are expected to emerge from the analysis and interpretation of the *DUC* data. Several multi-dimensional strategies (ranging from the situational to the symbolic, the administrative to the attitudinal) 'suggest themselves' at this review stage of the research program. User and administrator evaluations of the following suggestions will be sought as part of the research:

\* built environment design strategies which focus on surveillability and accessibility characteristics of buildings and domains. Suggestions will include the integration

of 'indefensible' buildings into integrated cluster/courtyard designs; and both the enclosing of residential domains or territories, and the restriction of access to them to a single entrance monitored by a gatekeeper.

- \* multi-purpose, mixed-use 'timezones' - to animate and populate the residential neighbourhoods or domains, with after-hours activities - located proximate to, and encompassing, student residences and activity centres.

- \* well-lit pedestrian corridors serving residential domains from all directions through the campus, and well-lit car parks adjacent to residences.

- \* student and staff participation in design, management and security decisions, thereby encouraging proprietary attitudes, informal territorial control and intervention strategies, and personalisation/appropriation of residential zones.

- \* enhanced security systems, including *conspicuous* campus-wide, electronic surveillance systems, after-hours security shuttle-buses serving residences (and other areas) on a frequent basis with well-lit and electronically surveyed bus stops, after-hours student-accompaniment services, etc. The introduction of a Campus Watch program will also be suggested - where the 'natural' student responsibility for the safety of campus users is actively and vigorously promoted, and the image of the campus as a naturally policed and 'safe-place' publicised in the surrounding communities and neighbourhoods.

- \* Residential College in-house security education programs (regarding theft deterrence behaviours); and acquaintance rape awareness programs - confronting male/female stereotypes, and educating women about signals and behavioural patterns found to precede such events i.e. knowledge is power...

- \* environmental managerial strategies which encourage accessible and confidential grievance procedures (for women students and staff, minority groups, etc). American evaluation studies suggest that University Judicial Boards are generally ill-prepared to handle rape cases, and their concern about the notoriety and stigma accompanying such cases may lead them to press for lesser charges (Warshaw, 1988).

- \* free assertiveness (anti-victimisation) and self-defense courses for women.

- \* information transfer programs during the students' first 'orientation week' on campus, where consciousness about ethical, equity and responsibility issues is raised.

- \* *un-learning* programs focussed on countering stereotypical 'male role' expectations, and women's inhibitions regarding the reporting of harassment incidents.

Finally, crime prevention through environmental design and management is one of a number of strategies which should be taught, as a matter of course, in all university Faculties which deal with the built environment. If neither teachers nor students are aware of the issue of defensible

design, or the need to undertake safety audits, and campuses themselves are poor examples of defensible design, how can we hope to derive an urban design philosophy and practice which helps give back the night to its citizens - particularly to its women citizens, and other vulnerable individuals.

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