Crime and the design of residential property – exploring the theoretical background

Part 1

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Abstract This paper provides a critical review of “Defensible Space” (Newman, 1973) and traces the development of Crime Prevention Through Environmental Design (CPTED) in America and Canada, and Secured By Design (SBD) initiatives in the UK. It is argued that various aspects of the theory have avoided consideration and require further investigation and research. It is opined that “defensible space” is the theoretical foundation to both CPTED and SBD and it is posited that a thorough re-examination of Newman’s ideas will serve to deepen our understanding of the complex relationship between the built environment and crime. British (BS8220) and European (CEN TC/325) Standards relating to urban planning and environmental design and crime reduction are currently receiving detailed deliberation and are based firmly upon Newman’s ideas. The projected need for some 4.4 million new homes in Britain (DOE, 1995) by 2016 and Lord Roger’s call for improvements in urban design to reduce suburban migration from cities (DETR, 1999) reiterates the importance of the subject matter. This paper (the first of two) recognises that design per se does not represent the panacea for reducing criminogeneity, rather, that “defensible space” CPTED and SBD should be considered as crime prevention strategies, which can, in common with all other initiatives, contribute to tackling the problem of residential crime. In conclusion, it is argued that further research concerning how “defensible space” is perceived by various crucial stakeholders in society is the way forward in this regard. A second, forthcoming paper (PM, Vol. 19 No. 3) will present these research findings.

Background and philosophy
The failure of the British Criminal Justice System (CJS) throughout the twentieth century to contain or reduce crime has meant that this ubiquitous issue continues to represent a highly contentious and hotly debated area of study. Home Office data for 1997 estimates total expenditure on the CJS of £12.6 billion per annum, an average prison population of over 61,000 (at a cost of £1,740 million) and a recidivism rate of 58 per cent (Home Office, 2000). Since 1918, crime has increased on average by 5.1 per cent per year, reaching 4.5 million in 1997 (Home Office, 1999). This arguably demonstrates that the CJS has clearly proven ineffective in operation and largely reactive in nature. It is posited that analysing the urban “stage”, where crime is clearly located, can contribute to our existing knowledge and understanding of criminality. This, the first of two papers, discusses the theoretical foundations to Crime...
Crime and the design of property

Prevention Through Environmental Design (CPTED), Secure By Design (SBD) and the design-affects-crime debate – namely; Newman's theory of "Defensible Space" (1973). It highlights the criticisms, discusses the recent developments and takes the debate forward into the twenty-first century by suggesting an alternative focus for research. The second paper will report on this research, present the findings and deliberate upon the policy implications.

Environmental criminology has emerged relatively recently to focus upon the spatial patterning or the geography of crime and deviancy. Crime patterns have been observed and distinct differences exist in both the urban-rural and suburban-inner city contexts. Early studies concentrated upon the spatial location of offenders (Burgess, 1916; Shaw and McKay, 1942). Ecological studies of crime rather than criminal location were relatively rare (Lander, 1954; Bordua, 1958) until victimisation surveys provided a new impetus to the study of offence location in the 1960s and 1970s. However, with the seminal work of Jacobs (1961) the area and focus of investigation narrowed significantly to implicate urban design. Although anecdotal in content, she drew attention to specific elements of design that she opined may jeopardise community safety. Angel (1968) and Jeffrey (1969, 1971) provided further impetus, but it was not until Newman published "Defensible Space" (1973) that urban design was widely associated with enhancing or reducing opportunities for crime.

These theoretical foundations have been widely criticised and remain largely untested in the British context. However, it is not the intention to embark upon the rejection of the concept of "defensible space" per se, rather, it is to suggest the necessity for a thorough and rigorous re-examination utilising an appropriate methodological approach that can be effectively and usefully applied in Britain. It is posited that certain aspects of the theory have avoided attention, analysis, and consequently the critical policy responses that may have ensued are conceivably flawed.

The projected 4.4 million new households required in Britain by 2016 (DOE, 1995) and Lord Roger's report "Towards an urban renaissance" (DETR, 1999), which called for a nation-wide campaign for improved urban design to reduce out-migration from the city, both add further critical dimensions to the necessity for progress in this field. Furthermore, the Social Exclusion Unit's report, "Bringing Britain together: a national strategy for neighbourhood renewal" (1998), has identified 3,000 deprived estates, where crime was a major concern. The contemporary "zeitgeist" of "sustainable development" is beginning to consider crime as part of its expanding remit and pending British Standards (BS 8220) and European Standards (CEN TC/325) are receiving detailed deliberation. These standards rely heavily upon Newman's work. Advice provided by the police forces' architectural liaison officers in the form of the SBD initiative, and a variety of housing design guidance notes are similarly firmly based upon Newman's theory, while also drawing on traditional target hardening strategies. As urban space expands relatively, across the globe, such
research concerns, and the subsequent policy responses they may influence, require a cautious and compelling approach.

Reppetto (1976) notes that the design-affects-crime debate has received considerable attention in recent years; however, this has “to a large extent, been ignored by criminologists” (Reppetto, 1976, p. 275). He argues that in spite of numerous studies linking crime and urban design; “… the criminological community has tended to reject or ignore design theory” (Reppetto, 1976, p. 280). Crucially, as Mawby (1977a) notes, the theory of “defensible space” is “not by a criminologist but by a planner” (Mawby, 1977a, p. 169). Reppetto offers three reasons for this apparent indifference. First, the nature of criminology itself. The field of planning and architecture provides the most committed support for urban design theory; however, “this is a discipline that has no tradition of interaction with criminology” (Reppetto, 1976, p. 281). This situation suggests “it is therefore understandable that criminologists would find designers’ methodology weak and the discussion of various criminological problems deficient or non-existent” (Reppetto, 1976, p. 281). For Reppetto, scepticism of CPTED by criminologists is understandable on a theoretical level, but it is another matter to ignore its potential policy pay-offs.

Second, incorrect perceptions of the nature of crime prevention via urban design have also contributed to its rejection. For Reppetto, “negative connotations of a deeply segregated community” (Reppetto, 1976, p. 283) have evolved from a misreading of theory and an overemphasis on target hardening and fortification. Furthermore, he claims that attempts to view urban design theories, as forms of government pacification are not supported in the writings of Newman. The “environmental determinism” argument is certainly not helpful to the design-affects-crime debate.

The third reason suggested for the rejection of such theory by criminology involves the practical problems of implementing design changes. Construction costs are involved in remodelling or new building projects and delays often occur in the planning, approval and construction cycle. Dislocation of businesses and industry is common, and physical changes, which are later proven ineffectual, can prove costly to amend. Thus, urban design “may cost a million dollars, take two years, disturb several hundred people and produce no guarantee of success” (Reppetto, 1976, p. 285). While additional police patrols are seen as quicker and cheaper and dislocate no one, they too offer no guarantees of success. However, Crowe (2000) argues that the effectiveness of such measures can be improved when they are implemented at the design stage, thereby reducing long-term costs.

More urgently, for those who design and manage the urban fabric, is the fact that recent research has highlighted the issue of premises liability (Kennedy, 1993; Atlas, 1994a, 1994b; National Institute of Justice, 1996; Hanson, 1998). It has been observed that courts in the USA are increasingly holding landlords and others “liable for failing to take sufficient security precautions to prevent criminal attack on their invitees, tenants and guests” (Kennedy, 1993, p. 106). He claims that increasingly, third parties are being sued for premises liability,
especially if criminal attack can be partially attributed to poor design. The rise of the victim’s rights movement in the USA in the 1980s forms the foundation for this trend, which has often resulted in CPTED specialists being called upon to act as expert witnesses in premises liability cases where design is implicated as a causal factor. If this trend were to migrate to Britain, as has been suggested by some lawyers (Infield, 2000), it would surely have a significant, far-reaching impact upon town planning, criminal justice agencies and residents alike.

Newman’s defensible space theory (1973)
Newman begins by examining the problem of ever rising levels of crime in urban USA. Responses to the problem appeared limited, ineffective and images of the future pessimistic. Fears of a drift towards a lock-up police state and the introduction of ever more restrictions seemed the all too obvious solution. This was emphasised particularly by the exodus of a significant proportion of the middle-class community out of the (criminal) inner city to the (law-abiding) suburbs. Indeed, this situation is mirrored to some extent in Britain today.

Newman claims: “This book is about an alternative, about a means for restructuring the residential environments of our cities so they can again become liveable and controlled not by police, but by a community of people sharing a common terrain” (Newman, 1973, p. 2). This alternative implicates the design of the built environment as an important causative factor with regard to criminality, and it claims that design can hinder or assist the criminal in the selection of both a crime site and a criminal act. “Defensible space”, for Newman “… is a surrogate term for the range of mechanisms – real and symbolic barriers, strongly-defined areas of influence, and improved opportunities for surveillance – that combine to bring an environment under the control of its residents” (Newman, 1973, p. 3). There are four elements of “defensible space” which act individually and in concert to assist in the creation of a safer urban environment:

- the capacity of the physical environment to create perceived zones of territorial influence;
- the capacity of physical design to provide surveillance opportunities for residents and their agents;
- the capacity of design to influence the perception of a project’s uniqueness, isolation, and stigma; and
- the influence of geographical juxtaposition with “safe zones” on the security of adjacent areas (Newman, 1973, p. 50).

Summarily, the social housing projects of Brownsville and Van Dyke, in New York (considered similar, in social terms), are compared and analysed with regard to recorded crime rates. According to the New York City Housing Association (NYCHA) police statistics, the high-rise blocks of the Van Dyke project experienced crime rates far higher than the low-level buildings of Brownsville (this rate is claimed to be as much as 50 per cent higher). NYCHA
also provided a range of demographic and socio-economic statistics for both tenant populations. Higher crime rates in the Van Dyke project were apparent, and since the tenant populations were considered broadly socially similar, Newman posited his explanation of this finding. The influence of the environmental design of buildings is then implicated as a causal factor to explain the differing crime rates in the two housing projects. Newman states: “The physical form of the urban environment is possibly the most cogent ally the criminal has in his victimisation of society” (Newman, 1973, p. 2). The four elements of “defensible space” mentioned above, can translate the latent territoriality and sense of community of inhabitants into a responsibility to secure and maintain a safe, productive and well-maintained neighbourhood. As has been stated, much of these ideas are currently being utilised; however, Newman’s theory is not without its detractors and critics.

The theory of “defensible space” has been criticised on a practical level. Indeed, Mayhew (1979) has asserted that the practical difficulties in utilising “defensible space” to combat crime are “by and large ignored by critics” (Mayhew, 1979, p. 156). Measures can come into conflict with fire regulations, raise the principle of segregation of public/private housing, and the issue of residents’ preference for privacy.

Adams (1973), Hillier (1973), Kaplan (1973), Mawby (1977a), Bottoms (1974), and Merry (1981) have all criticised Newman’s selection of sites for investigation and his use and analysis of crime statistics. The problem of isolating individual variables in the complex socio-spatial analysis of crime nevertheless remains today.

One of the major criticisms levelled at “defensible space” and CPTED initiatives is displacement. Kaplan (1973) claims that random interviews with residents, revealed that they felt that teenagers from both Van Dyke and Brownsville projects caused the higher crime rates. “What we have is not crime prevention through urban design, . . . but crime displacement” (Kaplan, 1973, p. 8). Hakim and Rengert (1981) claim there are at least five types of displacement that can occur in areas where “defensible space” measures are in operation. “Spatial displacement” can occur where an offender will simply commit crime in another area. A criminal may also change the time or day that a crime is committed to avoid detection and this is labelled “temporal displacement”. Third, “tactical displacement” may occur when situational measures deter an offender from a particular method in favour of another to reduce the possibility of being caught. The choice of an easier target, or “target displacement”, may also be eventuated by CPTED or “defensible space” measures. Finally, an offender may, when confronted with “defensible space” and situational obstacles to a target in crime, merely change the type of crime committed.

Hollin (1989) notes the difficulty in measuring displacement, but claims “there is little doubt that the studies of car steering locks (Mayhew et al., 1988) and CCTV (Burrows, 1980) did show evidence of this phenomenon” (Hollin, 1989, p. 203). Oc and Tiesdell (1997) cite the work of Gabor (1990), who argued
that the inability to detect and measure displacement does not mean that it does not exist. Barr and Pease (1992) go still further and argue that displacement or their preferred term; “crime deflection”, is total and can never be precluded by research. They also distinguish between “benign” and “malign” displacement. The former concerns the displacement of a crime by one that has less impact or causes less damage to persons and/or property. Conversely, malign displacement would involve displacement and replacement of a less important crime, by one which has a greater impact and more adverse effects. Generally speaking, Oc and Tiesdell claim that “a certain amount of displacement is not necessarily a compelling argument against preventive measures” (Oc and Tiesdell, 1997, p. 72). Newman (1973) himself actually opined that even if it is accepted that displacement is total, another question is thereby raised. This concerns the decision as to whether it is better to uniformly distribute crime or concentrate it in certain areas, with Newman stating a preference for the latter.

Recent research from the USA, however, suggests that displacement can be utilised as a positive tool, rather than as a negative side-effect (Saville, 1998). Moreover, it can also be argued that displacement occurs as a negative side-effect of all existing crime prevention initiatives and is not a criticism that is exclusive to “defensible space”, CPTED or the situational approach. It might even be postulated that in this era of “place-marketing”, where cities compete for global investment and business opportunities, displacement may represent a perfectly acceptable option. Indeed, Newman recognised the opportunity for “allowing displacement of crime to shopping, institutional and business areas . . . [which] are more easily served by formal police protection” (Newman, 1973, p. 206).

Newman’s theory has also been criticised for systematically understating and marginalising socio-economic and demographic factors in his methodological analysis of data (Hillier, 1973; Mayhew, 1979; Poyner, 1983; Smith, 1987; Moughtin and Gardner, 1990). Oc and Tiesdell (1997), argue that “by prematurely dismissing social factors and by concentrating on physical factors, the major criticism of Newman’s theory of Defensible Space, is that it might obscure the importance of other factors which might nullify attempts to make use of the theory to control crime” (Oc and Tiesdell, 1997, p. 55). Smith (1987, p. 149) wrote that CPTED is “. . . a relatively minor factor, and one that should not be considered independently of social organisation and local initiative”.

In defence of Newman, he does recognise the social foundations of crime within the text of “defensible space”. “The poor are most vulnerable to crime in any setting. But in anonymous buildings which facilitate their victimisation, we have the makings of a situation of crisis proportions” (Newman, 1973, p. 14). In addition, Newman (1973, p. 13) stated, “The root causes of inner city and ghetto crime lie deep in the social structure of our nation”. It is also clear that Newman attempted to find coupled projects that were similar in terms of socio-economic and crime data (see Newman, 1973, pp. 38-49). His failure, as an architect and planner, in this respect, arguably reiterates the interdisciplinary
and highly complex nature of the subject being studied. More importantly perhaps, is the highly complicated dilemma of attempting to locate truly comparable areas where socio-economic and demographic factors are controlled. Indeed, researchers continue to struggle to find such localities, almost 30 years on from Newman’s original study. Armitage (1999) and Brown (1999) have recently highlighted such difficulties in their evaluations of SBD housing estates in West Yorkshire and Gwent, respectively. Indeed, it is certainly highly questionable whether such an intricate operation is objectively achievable at all.

Wilson (1978, p. 674) claims Newman’s work (Newman, 1980; Newman and Franck, 1982) later assumed the need for social and physical factors to combine to reduce crime. She asserts that “both he and the DOE’s ‘difficult to let’ team found the real problems occur when the most vulnerable families become concentrated in the most difficult forms of housing”. In an interview with Heck (1987), Newman provides further indication of a consideration for allocation policies. “High-rises . . . do very well for high income populations on Fifth Avenue” (quoted in Heck, 1987, pp. 31-32). Anonymous areas were patrolled by paid staff such as elevator operators, resident janitors, porters and other service personnel, causing Newman to comment: “If you haven’t got that kind of money to attend to those spaces . . . you’d better not design them” (quoted in Heck, 1987, p. 32). When questioned on his position regarding the implementation of physical changes without social ones, Newman responded, “I would advocate physical where you have nothing more than three storeys; physical and social together where you have anything above that” (quoted in Heck, 1987, p. 32). The point here, perhaps, is to reiterate the management element and to suggest that Newman’s understanding of the social causes of crime may not have been effectively integrated within his “defensible space” methodology.

Undefended and offensible space
Merry (1981) ponders why, in some instances, “defensible spaces” are not defended. In her US study, half of all robberies reported in a victimisation survey occurred in what were considered appropriately configured spaces using Newman’s architectural criteria. Merry discovered that a project possessing “good” “defensible space” may contain contradictory design features within it that can hinder or prevent surveillance. Observable space does not guarantee the presence of an observer and even when they are present, intervention is neither necessarily automatic nor always effective. In addition, the display of territoriality and the extent of tenant intervention can be affected by certain factors. Ethnic heterogeneity and lifestyle variability may in some cases hinder social interaction and reduce the propensity to intervene. Lack of effective modes of intervention, such as a feeling of futility towards involving the police or an attitudinal dislike or fear of the police, may also reduce the possibility for resident intervention. Perkins et al. (1993) note further that territoriality will vary across and within neighbourhoods. The fear of crime or
retaliation relating to intervention may also be important. In an environment where criminal activity is both open, visible and more socially acceptable, citizens may fear reprisals. Finally, the nature of the neighbourhood regarding ease of identification of strangers can influence both the levels and the extent of intervention. Culturally and ethnically mixed areas may mean that such identification is more difficult and therefore may restrict the potential for assistance by residents to friends and family only.

Furthermore, from her study, Merry (1981) identified cultural and social factors that may influence intervention. Individuals from ethnic minority groups also differed in the size of the spaces they would defend and in the frequency of intervention. Similarly, social conditions may nurture fear and can also reduce the inclination to intervene. Being afraid may result in the withdrawal of the self into the home, which becomes heavily fortified. Venturing outside may be restricted and the curtains of these homes are generally drawn to protect privacy. Such people are less likely to intervene. Summarily, Merry (1981) notes: “This behaviour enhances the opportunity for crime by creating large sections of the project where residents can be expected not to defend the space, even when it is architecturally defensible” (Merry, 1981, p. 411). The importance of the social element is therefore reiterated: “Design has the potential for releasing defensive behaviour but only under certain social conditions” (Murray, 1981, p. 398).

Merry (1981) has demonstrated that the presence and nature of the user of space is an important issue in the design-affects-crime debate. Atlas (1991) expresses similar concerns, noting how strangers or criminals in space that is defined, architecturally, as “safe” may well create a sense of danger for the users. Similarly, familiarity with an area and the anticipation of intervention can nurture a sense of safety in environments defined as being architecturally more hazardous.

Atlas (1991, p. 65) extends the debate with his concept of “offensible space”. This is defined as “...the use of defensible space and environmental design strategies for enhancing security for the criminal element and obstructing justice”. He notes that it is not just town planners and designers, or indeed police architectural officers, who have successfully used the principles of “defensible space”. Drug dealers and criminals may possess an intuitive understanding of the concepts of territoriality, surveillance and control of access to create “safe” or “offensible” space within which they may carry out criminal activities. Figure 1 provides a graphical representation of Atlas’ ideas.

Atlas (1991) notes how the “drug den” can often be protected like a fortress and utilises “offensible space” features to:

1. identify outsiders and police;
2. investigate others who may approach;
3. pass on identified problems to those who are in control of the situation;
4. maintain communication networks to warn dealers of approaching police; and
(5) apply target-hardening mechanisms to the environment to impede police entry and help prevent the theft of drugs or other “goods” by outsiders (e.g. reinforced steel doors).

Jacobs (1961) argued that increased participation in the form of street-level activity can assist citizens to take control of the streets. Atlas (1991) similarly argues that criminals do likewise. Pathways and streets can become part of the criminal “turf”, bolstered by fences, walls and barricades to inhibit the movement of police. The enhancement of territoriality is achieved by the presence of other employees and associates such as look-outs, enforcers and distribution agents. The “stranger” in such an environment then becomes the person who is not doing business there, and who is made to feel unwelcome, surrounded by a sense of danger, and possibly at risk of personal injury or attack. Indeed, such behavioural and environmental cues provide the non-criminals with the information that signifies that they have entered a zone of “offensible space”.

**Theoretical criticisms**

On a theoretical level, Hillier (1973) attacks the use of territoriality as a “behavioural universal”. Indeed, MacDonald and Gifford (1989, p. 194) claim...
that “there remains a lack of evidence that burglars are deterred by territorial displays”. They studied the views of 43 people convicted of breaking and entering, analysing in detail factors such as road surveillability, occupants’ surveillability, symbolic and actual barriers and traces of occupancy as measures to test the concepts of territorial concern and surveillance. However, house value was the variable found to relate most closely to vulnerability, although surveillability was supported as a “defensible space” feature (MacDonald and Gifford, 1989, p. 204).

Significantly, as in the studies by Phelan (1977) and Bennet and Wright (1984), territoriality was not supported. Hunter (1978) studied Liverpool’s inner city and found that the “defensible space” improvements that were implemented were destroyed, ripped up or stolen by other residents. He claims that territorial definition “may be fine for professionally qualified, sensitive persons but doesn’t cut much ice with vandals, criminals and boisterous children” (Hunter, 1978, p. 677). Furthermore, Merry (1981) argues that Newman “is surprisingly vague about the process by which residents come to define space as their territory and act to defend it” (Merry, 1981, p. 398). Tijerino (1998) also claims the link between “defensible space” and territoriality is problematic. He asks: “How does a sense of ownership for an otherwise public setting emerge in a person and/or group” (Tijerino, 1998, p. 327). However, Brown and Bentley (1993) found territoriality to be an important factor in the burglars’ decision-making process and Taylor et al. (1984, 1985) found variation in levels of territoriality in different socio-economic groups. “High” and “low” economic status groups both exhibited low levels of territoriality, while the “moderate” socio-economic group possessed a higher degree of territorial sentiments. Clearly, this is an area which is highly complex and controversial, and in need of further detailed deliberation and study.

Booth (1981) is critical of studies that have examined the opportunity to observe, and claims that although this has been shown to be able to deter crime, this variable has been too narrowly defined. He studied accessibility to public areas and opportunities to observe and asked how these two factors may facilitate crime. He notes studies conducted by Waller and Ohikir (1978) that concentrated on opportunities to observe from neighbouring units; Molumby (1976) and Frisbe et al. (1977) evaluated the extent of opportunity to observe in relation to street lighting and shrubs, and Mawby (1977b) related the debate to vandalism of telephone kiosks. Booth (1981, p. 565) found that “outdoor features of the built environment . . . do not seem to facilitate or impede burglary or vandalism”, while “surveillance” was found to be of limited utility, at least for public spaces outside the dwelling. Public areas inside apartment buildings showed small differences “which suggest that easy access and opportunities to observe, facilitates crime” (Booth, 1981, p. 565). Booth’s study would appear to suggest that “defensible space” may best be applied to public areas within apartment buildings, although, since this was the area predominantly studied by Newman, perhaps this is not surprising.
Mayhew (1979) also questions some of the behavioural assumptions that underpin “defensible space”. He makes the point that visibility to, and the possibility of apprehension by residents may not deter all potential offenders. Indeed, those under the influence of drugs or alcohol may decode environmental cues differently, if they decode them at all. Attitudes towards the police and residents’ willingness to become involved are also questioned. Properties affording surveillance may not be constantly occupied, and if they are, criminal acts may not necessarily encourage the residents to actively attempt to locate such events visually, let alone contact the police.

Contradictions
Mawby (1977a) studied four estates in Sheffield and analysed Newman’s “Defensible Space”, claiming that it “fails to evaluate critically the possibility that these elements might contain contradictions within themselves” (Mawby, 1977a, p. 176). Indeed, each category may well contain some dimension which threatens, as well as enhances, security. In terms of territoriality, this defence is essentially directed at strangers and outsiders. However, legitimisation of the residents’ presence could enhance the possibility of crime by residents against other residents – Mawby notes that it would certainly not act to decrease such incidence. On the subject of “surveilance” he observes (Mawby, 1977a, p. 176) that “the same design might limit surveillance in one dimension whilst increasing it in another”. For example, in the Sheffield study, shops were situated with blocks of flats overlooking them – providing numerous potential witnesses to would-be crimes. Surveillance of crime in corridors without windows may indeed be minimal. However, although crime on landings may well be witnessed but not apprehended, such a crime may have not been witnessed in a low-density housing estate. In private housing a garden may provide a “visible barrier” (of the private garden) where, once infiltrated, can reduce the possibility of being observed. This contrasts with the situation of flats, where break-in offences may be more difficult for two reasons. Opportunities for entry commonly include the front of the building, in contrast to a house, which might offer entry at front, back, second floor, windows, etc. In addition, the relatively invisible corridor outside flats is “public space” and more prone to possible interruption by other residents than the back garden of a conventional semi-detached house. Mawby uses this argument to raise the point that it is possible to hypothesise “that flats will have less crime committed on them” (Mawby, 1977a, p. 177).

In the wider context, Mawby is also critical of Jacob’s and Newman’s suggestion that as the number of those “on the street” increases, so does the efficiency of policing by the public and therefore offence rates fall. He notes that larger numbers of people may increase the number of possible witnesses, but it may also increase the number of potential victims and offenders and make offenders less readily discernible. Mawby also claims that the Sheffield project shows “that where high offender rates were close to areas with ‘offence potential’, offenders from the high rate areas might even commit less crime in
their own areas, being attracted to more lucrative pickings nearby” (Mawby, 1977a, p. 177).

The influence and development of “defensible space”

It is also interesting to deliberate upon the reasons why “defensible space” theory gained such widespread popularity, given the shortcomings already addressed. The increasing disillusionment in Britain and America with existing frameworks for managing crime, arguably provided a window of opportunity for Newman and his disciples. The necessity to be seen to be intervening and attempting to address the problem in political terms cannot be understated. The highly visible nature of implementing design modifications as a potential solution was certainly an attractive characteristic, and indeed, remains so today.

Mawby (1977a, p. 169) observes that “defensible space” “almost immediately caught the imagination of the press and television, not only in America but also in Britain”. He claims (Mawby, 1977a) Newman’s theory is explicitly directed at high-rise developments, thereby gaining support from the ever-growing number of critics of such developments.

In discussing the criticisms of Adams (1973), Bottoms (1974), Hillier (1973), Kaplan (1973) and Mawby (1977a), Mayhew (1979, p. 152), comments that: “Despite these criticisms (which are perhaps not particularly well-known) Newman’s ideas have had great appeal”. Various reasons are suggested for this situation. First, the ideas inherent within the theory of “defensible space” can be located firmly within the domains of contemporary thought. “For academics, they fit in happily enough with a current emphasis – within psychology . . . and criminology itself – on the importance of the environment in determining behaviour” (Mayhew, 1979, p. 152). Labs (1989) claims that apart from Jeffrey’s publication, Crime Prevention Through Environmental Design (1971) “... criminologists . . . had neglected . . . the physical environment as a factor in criminal behaviour until they felt the commotion caused by Newman’s breach of professional turf” (Labs, 1989, p. 100).

On a general level, in comparison with earlier works such as Jacobs (1961), Angel (1968) and Jeffrey (1971), Newman’s views appeared to be infinitely more attractive, in that they do not involve major urban reorganisation. In addition, such views “are highly persuasive and have the respectability of being backed by seemingly extensive empirical research” (Mayhew, 1979, p. 152).

Smith (1987) notes that Newman’s theory is amenable to politicians across a wide range of the ideological spectrum. It is attractive to those on the “right” “because environmental engineering provides immediate, visible and unambiguous evidence of a commitment to stamp out deviance” (Smith, 1987, p. 147), and it does not suggest changes in the structure of society. In addition, for politicians on the “left”, it provides “a more acceptable scapegoat for today’s supposed demise of law and order than the stereotypical vandal, the unemployed working-class youth” (Smith, p. 147). For any political party, such an approach represents visible, tangible and positive action being taken.
Operationalising methods to create “defensible space” was an attractive feature of Newman’s thinking for practitioners, which Mayhew (1979) considers may have influenced the continuing federal financial sponsorship of his work, within the US research programme entitled “CPTED”.

**“Defensible space” and CPTED in America and Canada**

Although the phrase “Crime prevention through environmental design” (CPTED) was originally coined by Jeffery (1971), much of the theoretical and practical developments in this area have been based upon “defensible space” and upon subsequent research. Jeffery (1976) argues that three sources can be traced. First, from the academic community by way of a series of books, on environmental design (Jeffery, 1971), the geography of crime (Harries, 1974), and the spatial analysis of crime (Pyle et al., 1974). Second, from Britain, where “since the early 1950s the British police (Koepsell-Girard, 1975) have been involved in crime prevention through the manipulation of the physical environment” (Jeffery, 1976, p. 149). The third source concerns architects such as Newman (1973) and Reppetto (1974).

The similarities between CPTED and “defensible space” are numerous and can be seen in Figure 2.

The potential to encourage social interaction via environmental design is succinctly revealed in the following quotation by Moffat (1983, p. 21), which states “CPTED principles used in re-designing communities allow greater socialization which in turn helps to prevent crimes of opportunity”. The theoretical foundations embodied by “defensible space” were also apparent to Moffat, who commented that “CPTED is divided into seven related areas where

![Figure 2. The seven elements of CPTED](image)

**Source:** Moffat (1983, p. 23)
‘defensible space’ is at the root of the concept” (Moffat, 1983, p. 23, see Figure 3). The only area within this graphical representation that may perhaps be considered to be peripheral rather than central to “defensible space” is that of “activity programme support”. The remaining six elements of Moffat’s CPTED can clearly be located within “defensible space”. It may therefore be more appropriately represented by placing “defensible space” at the centre, as expressed in Figure 3.

Taylor et al. (1980, p.61) have stated that “The concept of crime prevention through environmental design (CPTED), developed by researchers at Westinghouse (1976, 1977a, 1977b; Lavrakas et al., 1978) is another version of second-generation defensible space theory”. “Defensible space” is central to CPTED, but in this refined and updated set of ideas, it is modified by the need for local resident/community support and involvement, and management assistance in this regard. Social “defensible space” is also a feature, suggesting improvements to neighbourhood image, social interaction/control and raising community awareness of crime prevention issues.

Jeffery (1999) recently wrote on the subject of CPTED, and claims Newman’s ideas were picked up by the US Federal Government via the Law Enforcement Assistance Administration, private corporations, i.e. the Westinghouse Corporation and by academics. He argues “these efforts at crime prevention were based upon Newman’s concepts and not mine” (Jeffery, 1999, p. 1). Furthermore, the US Department of Housing and Urban Development and the US Department of Justice both expressed interest in the early writings of Newman (Newman, 1973; Newman and Franck, 1980). Since the 1970s, Cisneros (1995, p. 5) claims “he has applied it in many locations and explored its
applicability in considerable detail (Newman, 1980; Newman and Franck, 1982)." He comments that despite many successes, the approach never caught on. Indeed, Cisneros states that: “For a time, in important policy circles, strategies stressing physical change simply became unfashionable” (Cisneros, 1995, p. 1).

However, “defensible space”, in the guise of CPTED in America, Canada, Australia, Holland, and SBD in Britain, is becoming contemporary and fashionable once again. “Today the pendulum seems to be swinging back to an increasing recognition that, in the right places, physical design does have a role to play in crime reduction” (Cisneros, 1995, p. 1).

Furthermore, Cisneros (1995, p. 3) asserts that Newman’s work has stimulated a “surge of new research and experimentation”. In particular he highlights the establishment of the “International Crime Prevention Through Environmental Design Association” (ICA), which has now been followed by the “Designing Out Crime Association” (DOCA) in the UK, and most recently, the Asia/Pacific Chapter in May 2000. The adaptability of Newman’s ideas is perhaps reinforced by the fact that the US Fire Administration (USFA) currently utilise “defensible space” to combat wildland fires via appropriate property and landscape maintenance.

Taylor et al. (1980) advanced the idea that there was a distinction between “first generation” and “second generation” “defensible space” (Taylor and Harrell, 1996). The latter introduced social and cultural features in the setting and “more realistic assumptions about territorial behavior and cognition” (Taylor and Harrell, 1996, p. 7). Some researchers (e.g. Fisher and Nasar, 1992) have developed this area and introduced a threefold grouping of physical features; prospect (for the user), refuge (for the potential offender) and escape (for the user and potential offender) into the “defensible space” theory.

Saville (1998, p. 8), claims renewed interest in CPTED recently has resulted in “a more comprehensive, ecological approach for reducing crime niches”. He claims this field is known as environmental crime prevention, situational crime prevention and environmental criminology, or, more specifically, “Second Generation CPTED”. Here, a risk assessment is required in addition to a consideration for displacement of criminality, which may occur. For Saville (1998), “It begins with environmental modifications to set the stage for reduced opportunities for crime niches, but it depends on additional social changes to maintain the impact of those modifications”.

Saville and Sarkissian (1998) are highly critical of Newman’s original publication (Defensible Space, 1973) and more recent work (Newman, 1996). In an article reprinted in the ICA Newsletter of April 2000, they attack it for “physical determinism”, and for working in isolation from criminological research. They also criticise Newman’s lack of consideration for recent research in “action research” where “community building” is recognised to be much more than just physical design modifications. However, Newman’s methods may have been highly individual and have certainly been widely criticised, but this does not justify such vitriolic treatment of the theoretical foundations of
CPTED or the re-presentation the “environmental determinism” debate by some researchers. With CPTED espoused by the ICA and selected states, and “defensible space” supported by the US Department of Housing and Urban Development and the Institute of Community Design Analysis, the academic “turf” of “design-affects-crime” has become somewhat “territorial” in itself.

**Defensible space and CPTED in Britain**

Escalating crime levels and the issue of “problem”, “difficult”, or “run-down” local authority estates slowly became a political issue during the 1970s in Britain, and Rock (1988) claims Newman’s “defensible space” galvanised this response. He further claims “There was an elective affinity between his ideas and those stirring in the Home Office Research Unit” (Clarke, 1982; Poyner, 1983). He also notes Poyner (1983) Wilson (1978), Coleman (1985) and NACRO (Osborn, 1986) “were all influential in lending structure to the spate of British initiatives and they all acknowledge their borrowings from Newman’s work” (Rock, 1988, p. 101). Pascoe and Topping (1998, p. 164) wrote that much of the crime-specific research carried out in Britain was based on “defensible space” and particularly “surveillance”.

Rock (1988) and Shaftoe (1994) provide a useful summary of the initiatives in the UK which have been implemented that were influenced by these largely inconclusive ideas. The Department of the Environment (DOE) conducted various surveys of “difficult to let estates” in 1974, 1976 and 1978. Social and Community Planning Research (SCPR) and the National Association for the Care and Resettlement of Offenders (NACRO) funded by the Home Office, via the Urban Aid Programme, began work on the “Cunningham Road Improvement Scheme” (Widnes) in 1976. Perceived success resulted in the establishment of the “Crime Prevention Unit” in 1978, the “Priority Estates Project” in 1979 and the GLC-funded “Safe Neighbourhoods Unit” (SNU) in 1980. By 1990, NACRO and SNU had carried out improvement schemes on over 100 housing estates throughout England and Wales.

From 1985-1994, the DOE’s Estate Action programme (not solely directed at crime reduction) aimed to implement social and physical improvements to transform “run-down” housing estates. In 1986, the Five Towns Initiative was launched by the Home Office, broadening the estate-based programme. 1988 saw the introduction of the Neighbourhood Watch Scheme, whose household membership increased from 2.7 million (14 per cent of all British households) in 1988 to 4.1 million (20 per cent) in 1992. In the same year, the Safer Cities Programme was launched and funded a maximum of 20 cities for three years at £250,000 per annum.

The 1980s saw a boom in the private security sector and in 1986, sales were estimated to have reached £1,600 million, dwarfing the Government’s Home Office spending of around £15 million on crime prevention for 1986 (Shaftoe, 1994). Target hardening devices such as alarms and CCTV presumably contributing considerably to these figures. Town centre management programmes emerged in 1992, amidst another electronic security boom in the 1990s.
In terms of these earlier initiatives (post-1990), in spite of the claims of successes in reducing crime generally, Rock (1988, p. 109) cautiously notes that, since so many different individual improvement schemes were commonly implemented at the same time “it is impossible to conceive how those individual measures worked”.

The work of Coleman (1985), was perhaps the most important in popularising and developing Newman’s ideas in Britain. Her ideas were well-received; stimulating the multi-million pound “Design Improvement Controlled Experiment” (DICE), carried out by the Land Use Research Unit (LURU) to put her theories into practice on a number of housing estates in London. The willingness of housing authorities to act on Coleman’s findings and her ability to attract the considerable resources for the “DICE” programme is testament to the influence and re-emergence of many of Newman’s ideas. “However erroneous her methods, the enthusiasm of politicians for simple . . . solutions to the complex question of housing has given her ideas an influence many of her opponents might envy” (Owens, 1987, p. 87). Campbell (1993, p. 316) observes that “Coleman became a star in the Eighties, employed by the Conservative Westminster Council to rehabilitate the massive and troubled Mozart estate, and well resourced in her research by the Government”.

However, in common with the US experience, “defensible space” did not always perform as positively or effectively as anticipated and attempts to evaluate it often proved inconclusive (see Tables I, II and III).

Poyner and Webb (1991) studied suburbs and new towns in Britain, and put forward 12 design features that were purported to reduce crime – all arguably variations or adaptations of “defensible space” concepts. Pascoe and Topping (1998, p. 163) have recently noted that “In the UK. Coleman and Poyner have explored defensible space in depth (Poyner, 1983; Coleman, 1985; Poyner, 1986; Poyner and Webb, 1991)”. Both argue that design modifications can reduce crime, Poyner arguing that design can offer or deny opportunities for crime; while Coleman opines that design can actually cause unsocial behaviour, and is therefore more deterministic in her stance.

Coleman’s work, however, has received similar criticisms to those levelled at Newman. Hillier (1986), is among others, critical of her methodology, which utilised the occurrence of litter, graffiti, urine, faeces, vandalism and children in care, as measures for crime. Furthermore, the issue of management is raised. Quadrant Estate, a mixed development of 4,000 dwellings had six porters and a resident caretaker in 1953, but by 1982 had only one caretaker. Indeed, Rock claims there has been a centralisation of management services since the 1960s. “…over the last 15 years, many local authorities, mainly in urban areas, have withdrawn rent collectors, resident caretakers, repair men and managers to central offices or town halls” (DOE, 1984, quoted in Rock, 1988, p. 100).

Coleman’s (and Newman’s) ideas continue to be implemented today “the Mozart Estate resembles an enormous building site” where a £25 million renovation scheme, courtesy of Westminster council, has meant “the old blocks of flats connected by walkways are being replaced by two-to-three bedroom
houses that have their own gardens” (Barrowclough, 2000). Labour’s New Deal scheme has set aside £10 million to upgrade the Ocean Estate in the East End’s more deprived area of Tower Hamlets. Newman’s fourth defensible space element “geographical juxtaposition” would seem to have relevance in this regard. On a positive note, Barrowclough (2000, p. 38) concludes “the
<table>
<thead>
<tr>
<th>Author (date)</th>
<th>Focus of study</th>
<th>Location</th>
<th>Main conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merry (1981)</td>
<td>Social factors in CPTED “undefended” “defensible space”</td>
<td>An East-coast port city (not named)</td>
<td>Social factors more important. Enthusiasm for CPTED should be moderated</td>
</tr>
<tr>
<td>Booth (1981)</td>
<td>Accessibility and opportunities to observe public spaces</td>
<td>Nebraska</td>
<td>May reduce crime inside public appartments Otherwise rejected as a “sterile” concept in public space outside</td>
</tr>
<tr>
<td>Newman and Franck (1980)</td>
<td>Crime in housing developments</td>
<td>San Francisco, Newark and St Louis</td>
<td>Strong support for Newman’s ideas</td>
</tr>
<tr>
<td>Newman and Franck (1982)</td>
<td>Effects of buildings size of crime and fear of crime</td>
<td>San Francisco, Newark and St Louis</td>
<td>Effect of building size not as important as expected. Social factors implicated</td>
</tr>
<tr>
<td>Greenburg et al. (1982)</td>
<td>Comparison of physical attributes and territoriality in high and low crime areas</td>
<td>Atlanta (Georgia)</td>
<td>Territoriality not a distinguishing factor in low crime areas</td>
</tr>
<tr>
<td>Brown and Altman (1983)</td>
<td>Surveillance and territorial displays in burglarised and non-burglarised houses</td>
<td>Utah</td>
<td>Strong support for both surveillance and displays of territoriality in non-burglarised houses</td>
</tr>
<tr>
<td>Brower et al. (1983)</td>
<td>Resident perceptions of territorial features and perceived local threat</td>
<td>Baltimore City (USA)</td>
<td>Real barriers and territorial displays seen to reflect care. Efficiency depends on context</td>
</tr>
<tr>
<td>Benett and Wright (1984)</td>
<td>Territoriality as perceived by burglars</td>
<td>UK</td>
<td>Territorial displays not perceived as important by burglars. Surveillance was important</td>
</tr>
<tr>
<td>Coleman (1985)</td>
<td>Design improvement controlled experiment (DICE)</td>
<td>London</td>
<td>Inconclusive – child density important</td>
</tr>
<tr>
<td>Nee and Taylor (1988)</td>
<td>Perceptions of burglars regarding target hardening techniques</td>
<td>Ireland</td>
<td>Target hardening viewed as being ineffective</td>
</tr>
<tr>
<td>Normoyle and Foley (1988)</td>
<td>Defensible space and fear of crime in elderly public housing residents</td>
<td>USA (nationwide)</td>
<td>Fear was lower among high-rise dwellers. Integrated old/young occupancy mix did not raise anxiety</td>
</tr>
<tr>
<td>MacDonald and Gifford (1989)</td>
<td>Deterrent effects of surveillability and territorial displays upon convicted burglars</td>
<td>Victoria, Canada</td>
<td>Surveillance supported territoriality had no effect</td>
</tr>
</tbody>
</table>

Table II.
Key studies relating to defensible space (published 1980s)
<table>
<thead>
<tr>
<th>Author (date)</th>
<th>Focus of study</th>
<th>Location</th>
<th>Main conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>White (1990)</td>
<td>Neighbourhood permeability and burglary</td>
<td>Virginia</td>
<td>Major arteries can attract burglars</td>
</tr>
<tr>
<td>Perkins et al. (1990)</td>
<td>Social and physical environment and participation</td>
<td>USA</td>
<td>Criminals and residents perceive defensible space differently</td>
</tr>
<tr>
<td>Perkins et al. (1992)</td>
<td>Street blocks, perceptions of crime and disorder</td>
<td>Baltimore city (USA)</td>
<td>Disorder-related cues increase fear of crime. Some support for defensible space</td>
</tr>
<tr>
<td>Nasar and Fisher (1993)</td>
<td>Crime and fear “hot spots”</td>
<td>Ohio (USA)</td>
<td>Low prospect, high concealment and boundedness increases fear. Some support for defensible space</td>
</tr>
<tr>
<td>Nasar et al. (1993)</td>
<td>Physical cues to fear of crime</td>
<td>Ohio (USA)</td>
<td>Trees, shrubs and walls provide concealment, blocked prospect and escape. Some support</td>
</tr>
<tr>
<td>Brantingham and Brantingham (1993)</td>
<td>Nodes, paths and edges and crime</td>
<td>Canada</td>
<td>Crime strongly related to aggregate elements of environment</td>
</tr>
<tr>
<td>Perkins et al. (1993)</td>
<td>Crime, defensible space, territoriality and incivilities</td>
<td>New York (USA)</td>
<td>Defensible space and demographics important. Signs of territoriality and disorder, less so</td>
</tr>
<tr>
<td>Nasar (1994)</td>
<td>Building exteriors and affective responses</td>
<td>USA</td>
<td>Image and meanings attached to housing types varied</td>
</tr>
<tr>
<td>Tsoskounoglou (1995)</td>
<td>Spatial vulnerability to crime</td>
<td>London</td>
<td>Defensible space does not enhance safety significantly</td>
</tr>
<tr>
<td>Harris and Brown (1996)</td>
<td>Home and identity displays and territoriality</td>
<td>USA</td>
<td>Homes can reveal territoriality. Defensible space supported</td>
</tr>
<tr>
<td>Perkins and Taylor (1996)</td>
<td>Community disorder and fear of crime</td>
<td>USA</td>
<td>Physical and social incivilities increase fear of crime</td>
</tr>
<tr>
<td>Ross and Mirowsky (1999)</td>
<td>Perceived disorder and decay</td>
<td>Illinois (USA)</td>
<td>Social and physical indicators can overlap and increase or reduce feelings of safety</td>
</tr>
<tr>
<td>Ham-Rowbottom et al. (1999)</td>
<td>Perception of defensible space concepts</td>
<td>UK</td>
<td>Cues not universally perceived by police/resident or burglars</td>
</tr>
<tr>
<td>Armitage (1999)</td>
<td>Secured by design housing estates</td>
<td>West Yorkshire, UK</td>
<td>Support for SBD and defensible space. 40 per cent fall in burglary. Some day-night displacement</td>
</tr>
<tr>
<td>Pascoe (1999)</td>
<td>Secured by design</td>
<td>UK</td>
<td>Support for SBD and defensible space</td>
</tr>
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</table>

Table III. Key studies relating to defensible space (published 1990s)
regeneration of the Mozart shows that it is not impossible to turn around – as long as the people who live there have an interest in doing so”.

An initiative that has developed as a result of this research in the UK, CPTED developments in the USA and, of course, the underpinning theory of “defensible space”, was to become known as “Secured by design”.

**Secured by design (SBD) and architectural liaison officers in the UK**

A relatively recent development which is directly influenced by Newman’s ideas is the “Secured by Design” initiative, launched in 1989, “by police forces in the south east of England to counter household burglary” (Pascoe and Topping, 1998). Since 1989, 35,000 homes have been constructed to SBD standards on 3,700 estates involving 630 building companies (Pascoe and Topping, 1998). Concomitant with this initiative was the gradual establishment of Architectural Liaison Officers within the 43 police forces in England and Wales.

The introduction of SBD firmly reasserts the belief in Newman’s ideas. It is a scheme whereby the police offer advice (which it is not obligatory to accept) to housing developers concerning new house-building projects. In Wales, however, SBD has now been adopted by Tai Cymru, for all new social housing projects. Steventon (1996, p. 235) claims “defensible space is a principle of crime prevention that has become embodied in current public policy through ‘Secured by Design’”. More recently, Armitage (1999) in her study of SBD housing estates in West Yorkshire, notes the link with “defensible space”. She argues (Armitage, 1999, p. 4) that community interaction, social cohesion and informal control can ensure that offenders do not feel comfortable and anonymous “through maximising what Newman (1973) referred to as ‘defensible space’ and territoriality”.

Three contemporary SBD evaluations have all reported positive results in terms of reduced crime levels (Armitage, 1999; Pascoe, 1999; Brown, 1999). However, an important consideration here, is that the police and SBD practitioners are passing on advice that has not been based upon unequivocal evidence, in spite of these commendable and influential studies. At a recent debate on “Crime and the Environment” at New Scotland Yard (2000), it was tentatively accepted that SBD works, although discovering and understanding the precise reasons why, was still an important research objective. At the conference, Brown highlighted the lack of understanding for the current theoretical support for SBD, reiterating the crucial importance of “defensible space”.

Reference to previous studies (see Tables I, II and III) indicate that studies utilising crime data and statistical analyses can produce varied, and often contradictory, findings. This reiterates the necessity to investigate the perceptive element within “defensible space”. The effectiveness of SBD has arguably been demonstrated, and a more widespread adoption of the scheme can only be considered a positive step. However, it is prudent and necessary to recognise the relatively untested theoretical underpinnings and put such ideas through a rigorous testing and evaluation procedure. A deeper understanding
of why SBD works in the British context may then emerge. Indeed, Cozens et al. (1999a, 1999b) have recently opined that new-build housing projects may well represent the opportunity for an ongoing assessment of SBD and “defensible space” concepts.

Theoretically speaking, it is not surprising that “defensible space” has been controversial, since there are a plethora of hypotheses inherent within the theory. Rubenstein et al. (1980) identified human perception, crime, fear of crime and territoriality as examples and labelled “defensible space” as “A rat’s nest of intertwining hypotheses” (Rubenstein et al., 1980, p. 6). The complex interplay that exists between the physical and social environment is problematic today; in the 1970s when Newman was working upon “defensible space”, it must have seemed immeasurably more complicated.

**Defensible space: some considerations for practitioners**

Critical analysis of the theory, methodology, history and development of Newman’s “defensible space” concept certainly illustrates that measuring the impact of design upon criminality is a highly complex and intricate affair. Indeed, as has been discussed, experience in America and Britain testifies to this fact.

In the light of this complexity, Krupat and Kubzansky (1987, p. 61) argue that “Designing defensible space is neither the panacea that some proponents have hoped, nor is it as irrelevant to crime and fear as some detractors have contended”. It is postulated here, that perhaps “defensible space” should be considered as a crime prevention strategy, which can produce variable levels of effectiveness – as is clearly the case with all other crime prevention strategies.

It has been demonstrated that the theory of “defensible space” can be criticised in its application, both in terms of theory and practice. Much research has contributed towards advancing knowledge in this field in both Britain and America, and SBD and CPTED are more robust and holistic as a result. However, the theoretical foundations of “defensible space”, which are entrenched within the philosophies of both SBD and CPTED, remain largely untested. Research studies continue to elucidate both positive and negative conclusions regarding the effectiveness of “defensible space” or design-affects-crime initiatives. Indeed, as Ekblom (1995, p. 116) comments “hard evidence from good-quality evaluations is lacking”.

Regarding the changes to the design of the built environment suggested by Newman, Adams (1973, p. 268) posits that they are “quite reasonable but they should be considered as experimental proposals rather than embraced as a panacea”. “Defensible space” should be regarded “as a first approximation rather than as a definitive and conclusive study” (Adams, 1973).

Perhaps the most influential of theories to be brought within the confines of CPTED is Wilson and Kelling’s “Broken Windows” (1982). In summary, the theory contends that physical deterioration gives rise to safety concerns and a withdrawal from the community can occur. Further delinquency and vandalism occurs, along with increased deterioration and community
withdrawal. Finally, potential offenders from elsewhere may then be attracted by the vulnerability of the area. Therefore, what began as one broken window, escalates to culminate in physical deterioration and social breakdown. The importance of the “management” of urban space is therefore stressed. Newman (1973) did recognise the influence of design upon the “image” of social housing although he only briefly discussed the debilitating effect of graffiti, vandalism and lack of maintenance upon such imagery. However, it is possible to consider “broken windows” as a logical development of this element of “defensible space”. Research into the perceptive elements within “defensible space” is therefore seen to represent the way forward. Ham-Rowbottom et al. (1999, p. 127) opine that in order to develop a clearer understanding of “defensible space” perceptions “... further research is needed specifically, an explicit comparison between ‘better’ and ‘worse’ houses within poor neighbourhoods and ‘better’ and ‘worse’ housing within richer neighbourhoods”. This crucial element of the management and “image” of housing designs will also be investigated, analysed and discussed in the second paper (PM, Vol. 19 No. 3).

This paper has highlighted the criticisms and shortcomings of “defensible space” to enable a deeper understanding of the theory and therefore to provide some direction as to how further research may refine these ideas. Tijerino (1998, p. 323) notes that: “For Newman, human perceptions are essential for the emergence of ‘defensible space’ (in particular the perceptions of the would-be offender)”. Of the numerous variables that have eluded “defensible space”, Tijerino expresses surprise “that perceptions have not been linked to the defensible space discourse since Newman’s theory states that defensible space creates the ‘physical expression’ that a space is defended” (Tijerino, 1998, p. 324). The views of those who manage and police the built environment are essential in this regard, since, as McGahan (1984) notes, “perceptions of a criminogenic environment channel investigatory activities. The routine task of urban policing, are influenced by how the environment is conceptualised” (McGahan, 1984, p. 125). Ham-Rowbottom et al. (1999) note the recent focality upon the role of mediating variables such as perceptions or assessments of physical design features. They claim: “An apparent assumption of defensible space theory is that all observers will employ the same physical cues to reach the same conclusion about a setting’s ‘defensibility’ ” (Ham-Rowbottom, 1999, p. 117). Merry (1981, p. 412) notes: “It is important to investigate what features make spaces seem dangerous”. Indeed, this perceptual element to “defensible space” cannot be measured using crime statistics and therefore must be investigated to supplement and refine existing knowledge in this field. Locations that are “safe” according to “objective” statistics may be subjectively perceived to be patently “unsafe” (Vrij and Winkel, 1991) and effect a withdrawal of residents and a reduction in the effectiveness of “defensible space” elements. How “defensible space” is perceived in the British context is therefore arguably the most appropriate way forward in this regard.

The second paper in this series (PM, Vol. 19 No. 3) will therefore provide a novel and unique investigation into the perceived criminogenic capacity of the
most common British housing designs. This will serve to broaden our understanding of “defensible space”, CPTED, SBD and utility of the “design-affects-crime” debate.

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