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## REDESIGNING THE LANGUAGE AND CONCEPTS OF CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

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### ABSTRACT

Crime Prevention Through Environmental Design (CPTED) is a familiar field of practice. But it has serious limitations. This paper describes an ongoing attempt to update its concepts and procedures and link them more closely to developments in architecture, design and practical/theoretical criminology, from which it is currently rather isolated. The intention is to enable CPTED both to benefit from these infusions and in turn share its distinctive contribution more widely. Additional aims are to stimulate thinking among existing CPTED theorists and practitioners, to help potential new users of CPTED to be critical and aware of their cultural and practical context, and to put them all in a position to actively participate in the improvement process. The paper briefly reprises the basic principles of CPTED, as they are now; identifies major problems and limitations of CPTED; indicates strategic directions for CPTED to evolve towards, and hopefully improve; and to help realise the strategy, puts forward a sharper definition of the field.

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Crime Prevention Through Environmental Design (CPTED) has a long history. Iron Age hill forts in Southern England are surrounded by complicated tracks and ridges. These are no accident of landscape, but a design. Their purpose was to deter cattle thieves, and if deterrence failed, could be used as vantage points for throwing stones and spears, and ambushing the raiders from side-passages.

The formalised practice of CPTED has however existed for just a few decades. It's quite widely used in countries like the UK, Netherlands, Scandinavia, Australia and North America, and has been starting up in Mediterranean and Eastern European regions; also Turkey, and the Middle East (Ekblom et al. 2013). But it has limitations, and some of us working as 'academic supporters of good practice' in crime prevention, think it badly needs an upgrade.

This paper describes the wider background thinking behind an ongoing attempt (Ekblom 2011a) to update CPTED's concepts and procedures and link them more closely to developments in architecture, design and practical/theoretical criminology, so it can both benefit from these infusions and in turn share its distinctive contribution more widely. Additional aims of the paper are to stimulate thinking among existing CPTED theorists and practitioners, to help potential new users of CPTED to be critical, and to foster participation in the improvement process. The ideas stem from a reading of research and practitioner literature (especially of guidance materials) and informal discussions with a range of practitioners in UK and elsewhere. Complementary initiatives to improve the research base for CPTED are also briefly considered but evidence of impact is not addressed.

The paper briefly reprises the basic principles of conventional CPTED; identifies major problems and limitations; and suggests in strategic terms how CPTED could evolve.

### **CPTED TODAY**

CPTED has diverse roots in architecture, planning, situational crime prevention, military design and more. It has tended to evolve through a succession of 'schools' (Jacobs, Newman, Jeffrey, Coleman, Poyner, Hillier, Saville) introducing sweeping changes of emphasis and direction more typical of the design and architecture world (think Bauhaus) than criminology. This convoluted history means a range of accounts exist (see e.g. Robinson 1996 for a review of earlier schemas). But the closest thing to a current and widely used definition was given by Tim Crowe of the US National Institute for Crime Prevention:

[CPTED is] The proper design and effective use of the built environment, that can lead to a reduction in the fear and incidence of crime and an improvement in the quality of life. ...The goal of CPTED is to reduce opportunities for crime that may be inherent in the design of structures or in the design of neighborhoods (2000: 46).

At the end of this paper I suggest an alternative.

### **CPTED principles**

Largely following the major reviews of Cozens et al. (2005) and Armitage (2013) there are seven main principles of CPTED currently seen as conventional practice.

- *Defensible space* (Newman 1972) is about designing buildings/enclosures to help occupants, owners and users keep criminals out.
- *Access control* is more specifically about actively keeping certain people out of buildings/enclosures, and the structures, procedures and technologies to achieve this, whilst admitting those people with a right to be there.
- *Territoriality* covers the human motivation to control space, who enters it and what people do within it. Good designs increase this motivation.

- *Surveillance* concerns how people – sometimes aided by design and technology – can help can act as crime preventers, whether police, employees, owners or general public, by seeing or hearing suspicious behaviour, and take some appropriate action.
- *Target hardening* is about making physical structures like walls, windows and doors resistant to attack and penetration by criminals.
- *Image* covers the appearance of a building, place or neighbourhood, not just aesthetics but relating also to social reputation and stigma of the place and its inhabitants. These factors can increase crime levels or feelings of insecurity, and harm economic regeneration. *Maintenance* contributes to appearance, obviously, but also to issues like effectiveness of security systems.
- *Activity support* is the beneficial effect of having significant numbers of people in, or passing through, a particular place, who are doing routine, honest activities like shopping or dining. The rationale is that by their presence and behaviour they will deny offenders some opportunities to commit crime.

### **CPTED – current theoretical base**

Although originating in architecture and planning (Newman 1972, Jacobs 1961) and holistic psychological/biological understandings of the determinants of behaviour (Jeffery 1977) CPTED has come to draw on various criminological theories to support and elaborate its ideas and its practice.

*Situational Crime Prevention* (e.g. Smith and Clarke 2012) is about manipulating the local environment and the crime targets and people it contains, to increase the risk, effort and guilt that offenders perceive when deciding whether or not to commit their crime, to decrease the reward and reduce any provocation (e.g. music penetrating the wall of an apartment). It also seeks to understand what brings offenders and targets together through their routine activities.

*Crime Pattern Theory* (Brantingham and Brantingham 2008) examines people's activity patterns, especially when traveling to, or gathering at particular places, in terms of 'paths, nodes and edges'; and whether places are 'crime generators' (many crimes happen there simply because lots of people are passing through, some of whom happen to be opportunistic criminals) or 'crime attractors' (criminals are specifically attracted there because of features that make crime less risky, less effort or more rewarding).

*Broken Windows* is a specific theory (Wilson and Kelling 1982) that suggests that if we fail to maintain the environment (for example by leaving broken windows unrepaired, or allowing litter to build up and public places to become dirty and overgrown), this prompts offenders to commit further damage, and makes honest people afraid to use the streets. This in turn reduces surveillance and social control, providing further opportunity for crime in a so-called 'downward spiral'.

### **CPTED – PROBLEMS AND LIMITATIONS**

The problems and limitations of CPTED identified below have not been fatal to the enterprise. But they can seriously mislead, generate wasted effort and restrict a healthy two-way flow between practice and theory. Failure to address them will undoubtedly constrain the future progress of the field.

### **Definition**

Crowe's definition, quoted at the beginning, is imprecise. In particular the *scope* of CPTED remains unclear, leaving it prone to meaning different things to different agencies and different professional disciplines, and to changes in fashion and drift of meaning. For example one can discern a post 9-11 shift from public space to 'hard security', not necessarily as a conscious choice. Various other scoping issues surface below. The definition's single-minded attention to *opportunity* moreover neglects immediate situational 'precipitators' such as prompts and provocations (Wortley 2008) and background sources of motivation such as lack of facilities for youth causing boredom, or thin walls causing conflict between neighbours over noise.

### **Disciplinary position**

Academically and professionally CPTED is in a disciplinary 'No Man's Land'. It's isolated empirically and theoretically from the rest of criminology and crime prevention, even from situational prevention; and isolated, too, from the main body of design and architecture.

On the *crime prevention* side there are a range of specific issues.

- There are problems *within* the individual principles of CPTED. For example, territoriality may not be universal – the cultural context will be important (Cozens et al. 2005; Ekblom 2011a; Ekblom et al. 2013). And Reynald (2009) showed that the relationship of territoriality with property crime can be incongruous depending on which dimensions of territoriality are operationalized and measured (signs of ownership such as property signs and decorations, versus physical/symbolic barriers intended to delineate private from public space).
- There are contradictions *between* CPTED principles – e.g. surveillance versus territoriality (see e.g. Mawby 1977; Reynald, 2009). For example, a high fence may keep people out, but once they are over the fence, it will block surveillance from the street.
- The detailed *criminological evidence base* needs developing on the specific risks of crime which CPTED seeks to tackle, and what interventions work in what contexts. Cozens et al. (2005) conducted a general review of the evidence of effectiveness for CPTED. They gave a cautious 'yes', that there was evidence that the individual components of CPTED seemed to be effective in cutting crime. But they also found less clear support for the effectiveness of comprehensive CPTED programmes. Broken windows theory in particular, while plausible, has received only partial support from research;<sup>1</sup> but CPTED practitioners often uncritically accept it.

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<sup>1</sup> Harcourt and Ludwig (2006) conclude there appears to be no good evidence that broken windows (or zero-tolerance) policing reduces crime, nor that changing the desired intermediate output of broken windows policing – disorder itself – is sufficient to change criminal behaviour. The first conclusion is not strictly relevant to *design* interventions; but the second is. However, this is surely not the last word on the affair.

- Cozens et al. also concluded that uncertainty remains about precisely how CPTED and its component parts work. Current approaches to situational crime prevention focus strongly on investigating *causal mechanisms* both to fine tune interventions and to guide evaluations (Pawson and Tilley 1997; Ekblom 2011b, 2012). But with important recent exceptions (e.g. Reynald 2011 on guardianship) this has not been the case with CPTED.
- CPTED also carries much *historical baggage*. The principles and theories haven't been combined into an integrated model, but lumped together in a rather arbitrary way, like bricks thrown into a barrel at successive times. Apart from some of the earliest theoretical writings (e.g. of Jeffery – see Robinson 1996), over some 50 years very little seems to have been actively *discarded* by the CPTED community of practice – not a healthy sign for a discipline with scientific aspirations – rather it has been *buried*. This has resulted in duplication, overlaps and gaps. Regarding knowledge management, in most guidebooks the main principles are simply placed side by side, requiring each user to fit them together as best they can. Simple in appearance, confusing in practice.
- The corollary of excess history is insufficient attention to the present and the future. Armitage et al. (2011) for example identify new kinds of crimes and conflicts emerging from changing architectural and place management practices: neighbour disputes regarding car parking allocation, fraud relating to theft from external mailboxes and landlords letting city properties for short city breaks.

On the *design and architecture* side:

- Curiously, until the recent study by Armitage et al. (2011) little focus has been given to establishing whether architectural award winning developments actually represent safe and sustainable communities. The results were quite complex. Area crime rates and sociodemographic factors explained much localised risk to developments; but several notable and highly significant effects remained once these variables were controlled for. The largest effect identified was that of the appropriateness of the design to the existing context. A high design-quality score on these criteria acted to reduce crime by a factor of 25% for each unit of the score. Interestingly high quality scores on the 'Layout' criteria acted to increase crime by some 16%.
- Given that changes of direction in architecture and design are a regular occurrence CPTED has insufficiently kept up to date with an understanding of the crime and crime prevention implications; nor has it ensured measurement techniques can handle changed circumstances (cf. Armitage et al. 2011).
- Crime Prevention is often simplistically set *against* other design principles, such as defensiveness *versus* accessibility, when design should be about creative optimisation of *all* the relevant values and benefits. The Design Against Crime Research Centre,<sup>2</sup> for example, aims to create designs which are simultaneously user-friendly whilst abuser unfriendly, of high aesthetic quality, which are not 'vulnerability-led' and avoid being fear-enhancing 'paranoid products' (Gamman and Thorpe 2007).
- Many police users of CPTED in practice see 'design' as a set of physical *products/buildings* – one of many alternative domains of intervention. Design should

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<sup>2</sup> [www.designagainstcrime.com](http://www.designagainstcrime.com) accessed 12/02/13.

also be seen as a *process* – a creative, innovative but disciplined way of doing and thinking, which applies to all kinds of crime prevention. Unfortunately, it's fair to say that attention to developing a CPTED process model aligned to design, architecture and crime prevention has so far been limited (Kitchen 2009; Monchuk 2011). Process approaches to guidance are starting belatedly to appear (e.g. European Standard CEN TR 14383-2); but the protracted and labyrinthine development undergone in this case (Benbouzid 2011) may explain some of the delay at least in institutional terms.

- There has been a neglect of architectural methodologies such as Alexander's Pattern Language (Alexander 1977)<sup>3</sup> although this does appear to be applied in the Netherlands (Armitage 2013).

### **Rigidity and adaptation**

CPTED can be used rigidly and dumbly, perhaps 'checklist fashion'; or applied in a more sophisticated process which is flexible and intelligent. This was a particular shortcoming in the early days of the Secured By Design scheme, the UK police certification system for secure buildings.<sup>4</sup> In one case, an *airport* car park was denied a Secure Car Park certificate solely because the lamp posts were too low to meet the standard. Fortunately greater sensitivity to context is advocated now.

If novice practitioners with insufficient training and experience are dispatched to visit architects and developers, they will probably follow the principles rather rigidly. Suggesting changes to the plans which are costly or hard to implement, and disproportionately emphasising the crime prevention requirement, could discredit the CPTED approach. Unfortunately financial stringency in the UK means such training has recently been seriously neglected and experienced officers paid off – a major loss of practice knowledge (Hirschfield et al. 2013).

Practitioners can sometimes fail to fit the design to the *context* (Pawson and Tilley 1997; Ekblom 2011a). A more general way of stating this problem is that 'cookbook copying' doesn't work. An example of cookbook copying that failed was an electronically secured bicycle parking facility (Gamman et al. 2004). This worked successfully in Belgium, and so was copied, fairly literally, to a suburban rail station in London – where few people used it. British cyclists are unaccustomed to paying for parking; nor are they prepared to walk as far from the bike park to the station as their Belgian counterparts.

A related point (Ekblom 2004) is that it's not helpful to consider individual designs and design interventions in isolation: the *configuration* of design features must be understood and evaluated as a whole, because all the causal influences upon crime interact to influence the offender's perception, motivation, decisions and behaviour, as well as influencing those of people who can act as crime preventers. This makes it difficult to make one-dimensional generalisations from evidence, such as 'target-hardening will always do X'. Together, context and configuration require us to take a probabilistic view of the impact of *any* kind of preventive intervention – crime reduction cannot be guaranteed.

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<sup>3</sup> [http://en.wikipedia.org/wiki/Pattern\\_language](http://en.wikipedia.org/wiki/Pattern_language) accessed 13/02/13.

<sup>4</sup> [www.securedbydesign.com](http://www.securedbydesign.com) accessed 12/02/13.

Rigidity is a particular problem for designing against criminals. These are adaptable people, prepared to make countermoves, to come back with new tools and to develop new criminal techniques (Ekblom 1997, 2008). Criminals will exploit the environment and may even shape it in their favour – for example making holes in fences so they can quickly escape. Ironically, drug dealers and criminals use CPTED principles to create ‘offensible’ space (Atlas 1991) such as hideouts for their own criminal activities.

More generally, designers often fail to anticipate criminals’ reactions to their creation. One anecdotal example of rigidity happened in a large-scale English evaluation (Price Waterhouse 1997) of an ultimately unsuccessful design recipe for improving public housing affected by a high crime rate. This recipe, following Coleman’s principles of addressing ‘design disadvantage’ (e.g. Coleman 1985), included the prescription that if more than a certain number of individual dwellings shared a communal entrance in an apartment building, it was necessary to fit a secure entrance porch. Unfortunately, in one building (according to the evaluation team in informal conversation), the new porch actually helped burglars reach the upper windows, which were less secure than those at street level.

### **Social dimension**

Another criticism of CPTED is that it neglects the wider social dimension. Research in the UK some years ago showed that the effectiveness of CPTED can be reduced (or increased) by demographic factors. For example, a large study of housing estates (Wilson 1978) showed that defensible space features did reduce vandalism, but that these effects were swamped by the much stronger influence of the numbers of young people living there.

Social or economic conditions may nurture fear, reduce inclination to intervene and result in withdrawal of people into their homes, which become heavily fortified. Early CPTED writings highlighted social aspects among others (Jacobs 1961; Jeffrey 1977; Newman 1980) but Broken Windows Theory became a somewhat diminished substitute. This gap was addressed by so-called *Second Generation CPTED* in the late 1990s (e.g. Saville and Cleveland 2003a,b). This focuses on:

- *Social activities* in a particular place
- *Social mix* of different types of people needed to encourage neighbours to take ownership of space and take advantage of natural surveillance
- Community *culture* or subculture
- *Social cohesion* and *social capital*
- A concern with *connectivity and accessibility* as much as defensibility.

Youth shelters (Hampshire and Wilkinson 2002) perhaps illustrate design-focused second generation CPTED. They provide somewhere outdoors for young people to hang out, without causing problems to other residents... but at the same time to be reasonably safe. Shelters are intended to work by satisfying young people’s motivation for something to occupy their time, and somewhere to meet. Some concerns have been expressed that shelters reinforce the isolation of young people from the rest of the community, when we should be doing the opposite (although this may be contrary to the wishes of adolescents

themselves of course). Clearly this is a matter for research and evaluation, and also pondering issues of intergenerational inclusion and cohesion.

Undoubtedly Second Generation CPTED raises important issues, and design certainly can't neglect social factors. But not all social interactions are positive – residents of small villages are aware of lack of privacy and of extreme pressures to conformity. Conflicts can occur between neighbours (e.g. over noise, animals, children, light), between young and old, or between ethnic groups. We must ask quite searchingly whether 'mixed use, mixed people' conditions are always beneficial. We need both an evidence base, and clarification of the values underlying our position. We must avoid the risk of flipping from simplistic architectural determinism, to the dilution of design interventions with vague and unmeasurable social ideas.

Saville's latest thinking<sup>5</sup> takes account of the broader move in all fields towards co-design – design *with* users as both stakeholders and 'local experts', not design *for* them as passive recipients of an intervention. This is consistent with the critique of Armitage et al. (2011) that current CPTED practice pays insufficient heed to user preferences and adaptations regarding through-movement, the use of space and car parking. This is illustrated by the frequent manifestation on new developments of 'desire lines' – unplanned paths usually on grass (and sometimes through fencing) where users wish to go.

### **Troublesome tradeoffs**

Despite public concern about crime as a whole, when it comes to the everyday priorities of house buyers and users of public space, crime prevention is often far down the list. So the challenge is about designing places that are secure without jeopardising their main purpose as a place for living, working, travelling or shopping, and without interfering with a range of other values through 'vulnerability-led' design (Gamman and Thorpe 2007).

- One major troublesome tradeoff is *convenience*. Badly-designed crime prevention functions can be a nuisance. Imagine someone coming home with heavy shopping bags, struggling to open security-locked entrance doors. And people will bypass these bothersome security features – one often sees doors thus-equipped jammed open by a fire extinguisher.
- Security technology in particular, such as CCTV, raises questions of *privacy and freedom*.
- Some designs fail to promote *social inclusion* – for example the 'gated estates' of the wealthy.
- The relationship between *sustainability* and crime is complex (Armitage and Monchuk 2009). If buildings are constantly burgled or damaged they aren't themselves sustainable and in some cases are left unoccupied or demolished. On the other hand, high-energy responses to crime problems, such as reliance on burning many kilowatts of street lighting, may not be ecologically sound.
- *Traffic or fire safety* requirements may conflict with security. People want to escape a burning building, but don't want to let burglars in. Some classic American fire escapes

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<sup>5</sup> <http://safe-growth.blogspot.co.uk/> accessed 12/02/13/

are designed with the last 5m of steps suspended above the street, which slide down under the weight of escaping occupants. This shows how ingenuity can serve both sides of the tradeoff with a creative leap rather than an unsatisfactory compromise.

- A familiar *aesthetic* critique of design against crime is that it inevitably leads to the ‘fortress society’ – blockhouses, heavy shutters, deserted streets and so on. This can happen, of course, but again it’s a question of thoughtless commissioning and bad, or compartmentalised, design. One can find aesthetically-acceptable designs for shutters on shops; many banks have abandoned their heavy screens without sacrificing security; and one can make positive ornamental features of things like window grilles. And contemporary counter-terrorism measures are often concealed behind designs that are appealing not fear-inducing – for example the large solid letters spelling ARSENAL at that team’s North London stadium are designed to resist speeding 7-tonne trucks laden with explosives.<sup>6</sup>

## **TOWARDS AN UPDATE: A SPECIFICATION TO IMPROVE CPTED’S FITNESS FOR PURPOSE**

CPTED appears to demonstrate some clear successes in reducing crime and fear. But it needs updating and should resolve the significant issues described above. However, it’s important not to rush straight into rewriting the guidebooks. For this reason I have been developing a specification for what an improved CPTED should look like, as the basis for informal discussion with practitioners of various kinds and academics. This section sets out that specification, and indicates strategic directions I believe CPTED should take. Some aspects are purely pragmatic; others combine the practical with the conceptual. The following headline requirements are expanded in some cases below, needless to say, with some crossover between the issues involved. CPTED must:

- Develop a clear social dimension.
- Differentiate more clearly between design interventions appropriate/effective at different scales.
- Become more evidence-based.
- Connect more closely to criminological theories and understandings of causal mechanisms.
- Become more sensitive, adaptive and flexible when proposing, or assessing, secure designs in relation to contextual and configurational influences – recourse to first principles and alertness to interactions is important (these may require ‘trial-and-adjust’ rather than ‘fire-and-forget’ approaches).
- Creatively address tradeoffs – balance values and priorities within crime and safety, and between safety and other values, involving stakeholders and political processes as necessary.
- Become more professional, in terms of expertise, discipline, quality assurance and ethics. This implies better education but also relates to standardisation.

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<sup>6</sup> See eg [www.flickr.com/photos/90478986@N00/270399869/](http://www.flickr.com/photos/90478986@N00/270399869/) accessed 12/02/13.

- Related to this, develop a good process-model for capturing, transferring and applying know-how; see e.g. the European Standard TR 14383-2.<sup>7</sup> Also, develop tighter language and concepts that are internally consistent and fit to connect with other literatures (see Ekblom and Sidebottom 2008; Ekblom 2011a).
- Become more futures-oriented – anticipating to crime-inducing changes in the social and physical world, and to making best use of advances in preventive technology.

### **Evidence-based and connected to causal mechanisms**

CPTED should continue to develop a wider range of approaches to measurement of design/architectural features to link to crime risk (Armitage et al. 2011), and the perceptions, choices and behaviour of offenders and preventers such as guardians or place managers (cf Reynald 2011).

Likewise CPTED should improve the overall quality of impact evaluation – although methodological issues including the configuration and context aspects make this challenging (as do the resources required to undertake sufficiently large-scale and hence reliable and valid studies). This can only be achieved by a *collective effort* by practitioners and their managers, to invest in such investigation and communication of its results, for *collective benefit*. This remains true even for failures.

Much more research and evaluation is required to extend our knowledge into the detail of context and mechanism (Pawson and Tilley 1997; Ekblom 2011b). Reynald (e.g. 2011) has taken the empirical and conceptual lead on this.

### **A clear social dimension**

It's rare for the built environment to influence criminal behaviour by physical mechanisms alone. Design will almost always interact with social processes and relate to people playing diverse crime-related roles: offenders, crime preventers and promoters (Ekblom 2011b), victims, witnesses, etc. The exact nature and boundaries of those processes are unclear, but they should contain some reference to:

- *Conflict* (e.g. between neighbours over car parking – Armitage et al. 2011) as a source of motivation for crime.
- *Social capital* (Putnam 1995) – relating to the capacity of the community to act together to solve problems like crime, on basis of trust, familiarity, and shared norms.
- *Involvement* processes – partnership, mobilisation, climate setting etc (Ekblom 2011b) by which professional preventers act through or with other users/stakeholders to implement preventive interventions.

Any social-environmental mechanisms identified should of course be clearly articulated, forming, as it were, a micro-theory of causation rather than a vague statement of relevance. Then we can consider how to design the environment to support these causes, and to work harmoniously with them. But 'social' should not just be as in 'social

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<sup>7</sup> CSN P CEN/TR 14383-2 - Prevention of crime - Urban planning and building design - Part 2: Urban planning. <http://www.en-standard.eu/csn-p-cen-tr-14383-2-prevention-of-crime-urban-planning-and-building-design-part-2-urban-planning/>. Accessed 12/02/13.

engineering’ – there are issues of power and participation to consider, well-covered on the crime prevention side for example by Sutton et al. (2008), and by the tendency towards ‘co-design’ (below).

### **Scale**

CPTED and its users must explicitly consider the geographical scale for analysing crime problems and their causes, and planning interventions. For example, the alley-gate is a very localised intervention, increasingly popular in UK to create a defensible enclosure around a small row of houses, preventing burglars from gaining access to the rear (Bowers et al. 2004). But we should also be considering the implications of the control of movement and accessibility for the whole block of houses... and maybe for the entire neighbourhood.

Then, zooming inward, designers must address fine detail. The top of the gate must resist climbers, perhaps using some decorative spikes. The lock must be usable perhaps by old people, and of course resistant to picking. The bottom of the gate must be low against the ground so people can’t squeeze underneath. Finally, it should be coated with corrosion-resistant materials – to withstand the corrosive sprinklings of dogs. Alongside design, of course, come the legal and social aspects of securing agreement between neighbours, access to services like waste collection, and practicalities of keyholding.

### **Context and emergence**

Replicating good practice in any kind of crime prevention is demanding and highly context-dependent (Pawson and Tilley 1997; Ekblom 2011b). The UK Designing Out Crime Association, the professional grouping of police and local government officials practising CPTED, has adopted the slogan ‘context is everything’. But CPTED must go beyond acknowledgement of this fact to develop an understanding and a systematic map of the *dimensions* of context so practical knowledge can accrue and be readily retrievable.

The micro-level of proximal causes that reside in the immediate crime situation and the offender provide a necessary focus and an anchor point for CPTED and indeed for most kinds of prevention (Ekblom 2011a,b). Geographical scale and the social dimension together introduce issues of *emergence* – where irreducible new realms of causation flicker into existence beyond the proximal. These include opportunity structures (e.g. Clarke and Newman 2006), market forces and economics in general, group dynamics, community and network processes on local, citywide and delocalised planes (especially via the Internet) and subcultural factors. All set the context within which CPTED must work and the waters it must navigate.

### **Scope and adaptability**

On the theoretical side, CPTED should not aim to be a catch-all for any kind of crime prevention, as sometimes seems to have occurred. It should focus on architecture and design whilst making links – not merging – with understandings of the chemical and physical influence of the environment such as lead pollution’s neurological effects and the stresses from noise etc. There should be a determined effort to explore where CPTED (if at all) is distinctive from generic situational crime prevention, and of course, ‘social’ or offender- and community-oriented kinds of approach. Likewise there needs to be some resolution of the relationship, at neighbourhood scale and above, between CPTED and ecological/social

theories of crime causation, whether ‘Chicago School’ or more recent approaches e.g. Wikström and Sampson (2003).

Turning to a more purely practical issue, how far upstream or downstream of design should CPTED cover? There has been a tendency to use the label CPTED indiscriminately to cover everything that aims to prevent crime in the built environment; as argued, this is not conducive to focused thinking.

It’s obvious that CPTED should address itself to *upstream* strategic planning issues such as regional/local design guides, the location of out-of-town shopping centres and so on. These set the scene for localised design decisions and potentially influence both the causes of crime and the possibilities for modifying these causes through design interventions.

It’s perhaps less obvious that CPTED should include the entire *downstream* field of *management and maintenance* of sites once designed and built. That, surely, is a different set of disciplines and a different kind of timescale. Where CPTED should enter, is in *designing for easy management and maintenance*. The simplest example is in designing so surveillance, cleaning and repair are straightforward and low cost.

Considering the wider *strategic* balance between CPTED and other kinds of intervention in a locality, there are two alternatives:

- Undertaking little thought at the planning stage, and making little investment in CPTED, leading to large and persistent running costs in management and maintenance; and export of yet more costs onto the police and criminal justice system.
- Putting much effort and thought into planning of developments, thereby setting the scene for similar efforts at the design stage. In principle this reduces the downstream running costs of management and maintenance. But we cannot eliminate these downstream activities entirely. We must incorporate some physical and human flexibility at the operational end, to cope with things the designer didn’t think about (there will always be gaps in the defence) and also to cope with changing land use and adaptive criminals (Ekblom 1997). Designing for easy upgrading of security levels is especially important. If the crime rate in an area is low, it’s sensible to build houses with relatively low-security windows, say. But if for some reason the crime rate changes, it helps greatly if the window frames have been future-proofed – designed to take a quick and easy security upgrade, rather than having to demolish the entire window frames and start again.

At a more *tactical* level, Armitage et al. (2011) encouragingly observed that developments could successfully implement features which countered the basic principles of CPTED, as long as the criminogenic impact of these features was considered in advance with expert involvement, and addressed in alternative ways.

### **Resolving troublesome tradeoffs – connecting to the discipline of design**

We need a clearer idea of what we mean by ‘design’ (see also Ekblom 2008; Gamman and Pascoe 2004). One often sees so-called ‘technofixes’ – shallow, single lines of defence that may be susceptible to countermoves by criminals – for example, making something that is inherently *insecure*, secure through the use of massive locks and chains. Such interventions can be described as ‘bolt on, drop off’. Nor should design be confused with heavy engineering. Engineering does the basic job well enough, but may be awkward to use, ugly, and perhaps even inspire fear. Fortified fencing and crude, ‘industrial-style’ alley gates are examples.

With sufficient priority and time to think in advance rather than a hurried attempt to inject security at the last minute when the rest of a design has been finalised, it’s always possible to generate solutions which remain functional, but are also aesthetic. For example, in front of Camden Town Hall, London, there was a bench seat in a sheltered corner. Street drinkers and drug addicts would occupy this seat, and use the corner as a toilet. The design solution was simple, cheap and visually attractive – the bench was removed and the pavement in the corner raised and made rough with cobble stones, thus uncomfortable to walk on. (It also had the unforeseen deterrent effect that the urinators would splash their shoes and trousers.) However, a strategic response to the problem would also need to consider where else the drinkers could go, or how otherwise to deal with them. Such solutions as emerge may or may not fall within the scope of CPTED.

While to some extent resolving tradeoffs is a matter of design and planning judgement, inevitably the political and user dimensions must be given an appropriate place, through some combination of democratic process and stakeholder involvement including co-design. Cultural appropriateness is important too (Ekblom et al. 2013).

### **CPTED – product or process?**

Now we return to the issue of how far to view design as a set of *products* such as buildings, and how far as a *process*. Although we cannot avoid considering the products, the process of doing design is extremely important. In fact, adopting the design way of thinking can benefit all of crime prevention. There are several reasons for this. Crime prevention requires practitioners to:

- Be adaptable, subtle and respect the tradeoffs. This involves customising the response to the context, and creating plausible proposals for new circumstances. What looks like straightforward *replication* of good practice will usually involve some degree of *innovation*, testing and improvement (Ekblom 2008).
- Handle uncertainty and incomplete knowledge of what works – however many evaluations we do, they will never cover every eventuality (Ekblom 2011b).
- Be more like expert consultants than technicians with a limited repertoire of diagnosis and response (Ekblom 2011b; and see van Soomerem and Woldendorp 1997 for a related argument). Although necessary, expertise shouldn’t serve as a barrier to maintain a safe distance from ordinary people – what one could call *professional defensible space*. So we should follow what is a major trend in the design world as a whole, known as *co-design* (Burns et al. 2006). That means undertaking the design task

with a significant amount of participation and shared ownership of the creative and decision-making process with the *owners and users* of buildings, streets or malls.

- Anticipate and allow for change.

### **CPTED – FACING THE FUTURE**

I've argued that CPTED must lose historical baggage, and update in several ways. But, as with all crime prevention, the task of progress doesn't cease when we arrive at the present day. Society is always changing – now, faster than ever. CPTED must thus pursue a moving target, and become adaptable itself.

*Crime* itself is changing – new tools and new targets constantly emerge (Ekblom 1997, 2005). Society has changing *priorities*. We now look for sustainability, low energy solutions, resilience of buildings to climate shift, and to terrorism. The balance between privacy and freedom versus security continually alters. We also have a changing *context* for crime on all scales. This generates new crime threats – but also new crime prevention opportunities:

- There are always new uses for land. What was industrial land may become residential or service-oriented.
- With wireless connection comes an increasing blur between products, places and systems.
- Intelligent homes will link to the Internet and possess multimodal security systems less prone to false alarms.
- The balance between automobiles and public transport will keep shifting.
- Cameraphones are changing the nature of informal 'eyes on the street'.
- New building materials will arrive – sensitive, resilient, maybe they will digest graffiti or even chewing gum!
- Economical change (materials, products become cheaper and thus easier to user)
- Demography (an aging population = less crime but more fear)

### **CPTED – RECONSTRUCTION BEGINS**

To fully reconstruct CPTED to be both practically useful and academically enriching is challenging. This is best taken in stages. A first step, below, is my attempt so far to develop a new definition and statement of scope for CPTED.

#### **Redefining CPTED**

My proposed definition encompasses the range of issues covered above. CPTED is:

- Reducing the possibility, probability and harm from criminal and related events, and enhancing the quality of life through community safety
- Through the processes of planning, architecture and design of the environment

- On a range of scales and types of place, from individual buildings and interiors to wider landscapes, neighbourhoods and cities
- To produce designs that are 'fit for purpose', contextually appropriate in all other respects and not 'vulnerability led'
- Whilst achieving a balance between
  - the efficiency of avoiding crime problems *before* construction
  - and the *adaptability* of tackling them through subsequent management and maintenance

The emphasis is on process, so the definition is deliberately not confined to any particular products, kinds of intervention, regulatory systems or cultures. The other important thing to note is that this is a *definition in depth* – each of the subsidiary concepts (such as community safety) has, or will have, its own definition. Many of these are already in [www.designagainstcrime.com/crimeframeworks](http://www.designagainstcrime.com/crimeframeworks), Ekblom (2011b) and <http://5isframework.wordpress.com>.

Other, more concentrated work to define the key concepts of CPTED (such as territoriality) and their interrelationships is reported in Ekblom (2011a) and on <http://reconstructcpted.wordpress.com>. One major theme of that work is to distinguish between *environmentally-oriented tasks* versus *environmental properties and features* that support or hinder those tasks. An example is defence and defensibility. It also considers the 'dark side' of the environment, covering offenders' countermeasures to prevention and their own counter-exploitation of space, buildings and what they contain. The ultimate intention is to produce a more rigorous, yet deeper and better-integrated conception of CPTED such that researchers, practitioners and knowledge managers alike have a decent set of tools to think, communicate and practice with.

In the course of this process of redesigning CPTED, it will of course be important to critically revisit ideas from past contributors since, as said, much of the evolution of the field appears to have been driven by fashion as much as necessity – more like sexual selection than natural selection!

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