

## Deconstructing CPTED... and reconstructing it for practice, knowledge management and research

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### Abstract

This paper describes the latest stage of an ongoing attempt to update and upgrade CPTED's concepts and actions and link them more closely to developments in architecture, design and crime science. The concept of territoriality, for example, is central to the practice domain of CPTED. Yet territoriality is only vaguely defined within that domain, as are the other core concepts such as activity support and target hardening; and all of them confusingly intersect and overlap. The paper attempts a remedy by developing a suite of *definitions in depth*, relating the core concepts to various frameworks and discourses developed for crime prevention and design against crime, and more generally exploring ways in which CPTED could become richer and more subtle. It will also consider the 'dark side' of the environment, covering offenders' countermoves 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 useful for practice, research and theory alike. The paper should be considered as work in progress, indicating what might be possible and stimulating debate rather than offering a definitive resolution of the issue. Further steps are suggested and constructive contributions from readers are invited.

Key words: access control, activity support, CPTED, crime prevention, defensible space, image and maintenance, surveillance, target-hardening, territoriality

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## Introduction – the need for definition in depth

In the introduction to this issue (and see also Ekblom, in preparation), it was argued that the practice field of Crime Prevention Through Environmental Design (CPTED) needed updating in order to remain practically relevant and theoretically and empirically sharp. In particular, it needed better links to its source disciplines including planning, design, architecture, policing, criminology and risk management; and clearer definition and scope. The latter extended not just to the definition of CPTED itself, but to its component concepts: *territoriality; target-hardening; defensible space; access control; image and management/maintenance; activity support; and surveillance*. Terms vary (this is part of the problem), but throughout this article I use by default the terms and descriptions presented by Cozens et al. (2005) in their major review of CPTED. I should also declare at this stage that I set aside for explicit consideration on another occasion the more social, and socio-demographically-oriented ‘Second Generation CPTED’ concepts (Saville and Cleveland, 2003a, 2003b) of *community culture, cohesion, connectivity and neighbourhood capacity*, although aspects of these enter the discussion at various points.

Definitions serve multiple purposes. They are tools for thinking; planning action; communication and coordination between practitioners, between researchers and from each to the other; and for accumulation of practice knowledge, evidence and theory. They are especially important where cross-disciplinary or cross-national research and practice are involved (for example in preparation of European CEN standards of secure urban design and construction).<sup>1</sup> Neglecting them can waste much time, effort and opportunity; and contribute to implementation failure, a serious problem in crime prevention (Ekblom 2010a). Such neglect can also help isolate a field from its ‘intellectual blood supply’, as has arguably happened with CPTED.

Systematic attention to the task of definition, and adherence to those definitions that have been agreed, is commonplace in hard science, and science-based practice such as medicine which has a ‘controlled vocabulary’.<sup>2</sup> But it is rare in practice-oriented social research, and crime prevention practice itself. Not just any definition will suffice, though. There’s little point developing clear ‘top-level’ definitions of single, well-honed sentences if they rest on subsidiary concepts like ‘risk’ that are themselves ill-defined or, taken as a suite, inconsistent.

I use the term *definition in depth* to describe the practice of defining a given, key, concept in terms of a suite of subsidiary concepts each of which is defined in turn. The individual terms are designed for clarity, and the *relationships* between the terms form a consistent and interlocking whole. Examples of definitions in depth are in Ekblom (2004a) on partnership, Ekblom and Sidebottom (2007) on product security (with a suite of 31 carefully interlinked terms), and Ekblom (2010a) on crime prevention and community safety.

The plan of this paper is as follows.

- First, I focus on *territoriality* as an example of definitional weakness, considering the adverse consequences this has for practice and research.
- Then, I look more closely at the way different *discourses* – alternative perspectives and languages of thinking and communication – serve to confuse and constrain the development and application of ideas within the CPTED domain. More specifically, I consider the distinct discourses of Crime Prevention, Through (in terms of practical

management of action), Environment, and Design, in each case building up some key concepts that together can form improved foundations of CPTED.

- The next section returns in greater depth to Environmental Design, to explore some ways of developing 'primitives', a shortlist of elementary causal properties and distinguishable features that could eventually, with more development and discussion, contribute towards a language for design.
- Then reconstruction of CPTED begins – but I should re-iterate here that this article doesn't aspire to complete the task, merely to indicate possible directions and to stimulate debate, which has rather ossified in recent years. Each of the core first-generation elements of CPTED gets similar treatment: unpicking the concepts, distinguishing between tasks and environmental properties/features, attempting clarification of the concepts, and of how they relate to each other and to some of the basics and primitives already mentioned. I also attempt systematic consideration of the 'dark side' (Cropley et al, 2010; Gamman and Raein, 2010) of criminal countermoves and counter-exploitation of the environment and its design. Treated in rather piecemeal fashion in CPTED, these aspects are vital to an understanding of the dynamics of crime and its prevention in the built environment.
- The paper concludes with a summary and consideration of possible next steps in the rebuilding of CPTED.

### **Territoriality – important to define well, but badly defined**

Territoriality is a central element of CPTED, relating to concepts of private and semi-public spaces. In practical terms it is realised, for example, through barriers both symbolic (such as signage or changes in road surface) and real (such as fences defining particular spaces).

Unfortunately for such a key concept, territoriality is defined in a very limited way. Cozens et al. (2005: 331), for example, in their major and very thorough review of CPTED, note that the concept is 'fraught with difficulties associated with definition, interpretation and measurement'. However, while well describing the problem, they seem unready to tackle it head-on. Their own initial definitional effort refers merely to 'proprietary concern' and a 'sense of ownership', supplemented later in the page by an allusion to additional practical components of territoriality including 'Eliminating any unassigned spaces and ensuring all spaces have a clearly defined and designated purpose,[and] are routinely cared-for and monitored.' These activities involving the control of space and the kinds of behaviour permissible within it are, for sure, the kind of things that the exercise of ownership might involve, but they seem 'tacked on' rather than part of an integrated definition that can efficiently and effectively guide practice and inform research.

Expanding the above discussion on the generic functions of definitions, this has particular consequences.

- Practitioners tend to assume they know what is meant by territoriality, based on vernacular understanding. But different practitioners, perhaps from diverse professional disciplines, may have different interpretations and usages of the term, leading to poor communication and obstacles to cross-disciplinary collaboration.

- If we're vague on what territoriality is, in principle or in practice, we cannot spot *weaknesses* in design relating to territoriality. According to the Scientific Realist account of the field (Pawson and Tilley, 1997, Pawson, 2006), how interventions actually work in cause-effect terms – their *causal mechanisms* – is vital understanding that is simultaneously theoretical and practical.
- Mechanisms are central, too, in the capture, consolidation and transfer of *knowledge of good practice* in crime prevention (Ekblom, 2010a). Replication of 'what works' success stories has been shown (e.g. Tilley, 1993) to be challenging, and so context-dependent that in many cases, we have to talk as much about *innovation* based on generic, and generative, principles, distilled from site-specific mechanisms (Ekblom 2002, 2005a, 2010a).
- Nor, if we lack clear concepts, can we positively *design* for territoriality. This is because designers need focus and guidance for what they are trying to achieve, ranging from clarification of the central underlying values their designs must realise (such as privacy and ownership) to articulation of the tradeoffs and conflicts they must creatively resolve between security and, say, inclusiveness, sustainability and permeability (see, for example, Armitage, 2007; Armitage et al. (this volume). But design conflicts and tradeoffs can happen *within* secure design too (Cozens et al., 2005). For example territoriality may conflict with surveillance: barriers signal people to keep out but may block vision of those who have managed to get in. For very practical reasons designers thus need to understand what exactly are the conflicting principles they are weighing up, so they can creatively maximise on *all* desired properties rather than achieve a bland compromise. Elementary designed features that help resolve this particular example include see-through barriers (using transparent materials or including gaps as with paling fences) or ones of reduced height.
- In evaluating the *impact* of designs on crime and other outcomes, it is usually necessary to employ *intermediate outcome* measures, ideally relating to mechanisms as just discussed. For example, if certain architectural features are designed to foster territoriality as a means ultimately of reducing burglary then we should expect to reliably observe an increase in relevant territorial behaviour, whether on the part of occupants protecting their premises and confidently challenging intruders, or of would-be intruders perceiving greater risk and perhaps experiencing discomfort. Should burglary levels significantly fall such intermediate measures act as a cross-check on the internal validity of our causal inferences (was the fall due to the intervention or to coincidental background changes? Did the intervention work the way we anticipated or by some other mechanism?)
- Intermediate outcome measures also have the advantage of giving more rapid *feedback* on designs while these are still evolving. A sharper understanding of concepts and mechanisms of territoriality is therefore needed to monitor and adjust how preventive interventions are performing, whether in familiar or novel contexts, and whether refurbishment or new build. To set this in a wider context, the field of *post-occupancy evaluation* in architecture (e.g. CABE, no date) is shamefully under-emphasised in practice and research. But given the difficulty of predicting human behaviour and the performance of built environments designed to cope with, elicit or inhibit particular activity, fine adjustment is usually necessary (and sometimes even coarse adjustment) –

this has more recently become known as *soft landing* of buildings (BSRIA, no date). Such approaches will only work efficiently with good conceptual tools and an understanding of mechanisms to guide measurement and adjustment.

- Finally, researchers and practitioners need to understand and allow for the subtle *cultural and subcultural* interpretations and dynamics at different ecological levels (individual, household, community) and geographical scales that influence how territoriality is implemented and accepted (Merry, 1981) and how it might go wrong. The last could happen as a negative side-effect of deliberate, well-intentioned acts of design (certain groups get inadvertently excluded from a particular space, for example), or as a by-product of the territorial dimension of human conflict (for example, gang territories – see Kintrea et al., 2008).

In sum, before existing designs of built environment can be properly criticised or new ones developed, adjusted and evaluated, before practice knowledge can be efficiently captured, consolidated and transferred, and before cultural nuances can be studied and taken into practical account, territoriality has to be defined and its discourse clarified.

But there is more to attend to, because all six core concepts of CPTED are entangled and overlap. To take the most obvious cases, one thing we do with territory is defend it, and control access to it. (Wortley and McFarlane (in press) likewise distinguish two aspects of territoriality as ownership and guardianship.) Surveillance may contribute to how we undertake the defence. What is target-hardening, as commonly used to refer to the exterior of buildings, except a means of defending space? To understand one concept, such as territoriality, we therefore have to understand much of the rest.

The obvious next stage is to try to put right what I have argued is wrong. This will require quite a Herculean task: deconstructing the core CPTED concepts; developing definitions in depth so the 'buried connections' and common subsidiary elements between and beneath the concepts can be exposed to view; ensuring they employ consistent discourses; and straightening out the overlaps and inconsistencies such that researchers, practitioners and knowledge managers alike have a decent set of tools to think, communicate and practice with. Ultimately this should form a firm basis for exploring the more subtle and complex social aspects of CPTED, but as said, extending the analysis to 'Second Generation CPTED', with its greater emphasis on social processes, is for another time.

### **Discourses – use of language and concepts**

We begin with a consideration of discourses. There are many ways to describe preventive interventions, but no single best one. We all, researchers and practitioners alike, tend to wander unconsciously from one discourse to another. For example, one often hears 'deterrence' juxtaposed or contrasted with 'prevention' when the former is a specific mechanism, the latter a generic purposive activity – 'apples' versus 'food', if you like. This usage may stem from associations of the former with 'cops, courts and corrections' institutions, the latter with civil interventions (Ekblom, 2010a): the implicit *institutional*, discourse (of who does what) is driving the confusion when we should be centring on a discourse based on *intervention* (what is done and how it works). The deliberate and reflective use of discourses is not mere pedantry, but can positively aid communication,

thinking and practice (see Ekblom, 2010b on defining the security function of a product using purpose, niche, mechanism and technical discourses).

### *Discourses of Crime Prevention*

We can readily distinguish the following discourses on the crime prevention side:<sup>3</sup>

- *Functional* – purpose, relating to outcome (e.g. ‘delivering crime prevention or community safety’);
- *Problem-oriented* – functional but tackling specific crimes in specific places (e.g. ‘reducing burglary in Heligoland Estate’);
- *Performance* – purpose, set against target criteria (e.g. ‘reduce crime by 10%’);
- *‘Reverse-functional’* – frustrating *offender’s* purpose (e.g. ‘disrupting plans for bank raid’);
- *‘Reverse-causal’* – the causes the intervention aims to remove, weaken or divert (removing motivation, opportunity) ;
- *Mechanistic* – how the intervention is supposed to work (e.g. ‘by discouragement – increasing the effort, reducing reward’);
- *Technical/structural* realisation of intervention *principles* through a practical *method* (e.g. ‘increasing the effort of burglary by raising the height of the fence’);
- *Constructional/instructional* – how to manufacture, implement, install method (e.g. ‘instructions for anti-graffiti coating’);
- *Delivery* – e.g. *targeting* of interventions (e.g. ‘primary, secondary, tertiary prevention’ (Brantingham and Faust, 1976); elsewhere I criticise how this has become used as a substitute for more mechanistic, intervention-focused descriptions (Ekblom, 2002, 2010a);
- *Mobilisation* – how to get people to implement the intervention (e.g. ‘a publicity campaign’; again, lists of preventive projects often juxtapose, for example, ‘publicity’ with items such as ‘target-hardening’ when maybe the publicity campaign in question is about getting residents to do target-hardening themselves).

Which of these discourses is suitable for CPTED and its core tasks and desired environmental properties? The answer is that they probably all are, but at different stages of the design process, from requirements capture to concept design, to lab trial, to field trial, to manufacture, marketing and sales, installation and operation; and for developing standards and guidelines. Arguably, though, the mechanistic and the technical/structural discourses should be the central anchor – surely, everything else depends on how the intervention works in principle and in practical detail. Any account of a CPTED intervention that cannot supply this information is likely to be vague, sub-optimally executed and difficult to evaluate or transfer successfully to new contexts.

### *Discourses of ‘Through’: action-management*

We also need to be more self-aware about how we use the discourses of action and project management. Terms such as tasks, roles, projects, schemes, goals and objectives are often deployed with free abandon. There are international issues too. In American English, in which much CPTED material is written, the term 'program' tends to mean more modest managerial and geographical scales of action than its British counterpart (as in the National Crime Reduction Programme), and of course 'housing project' in America is less a managerial term than a geographical one. There is probably little that can be done here except to remain alert and to make definitions explicit for non-native users of English.

Within CPTED itself the core concepts are rather carelessly described in action terms. Target-hardening, access control, activity support and surveillance are *tasks* (actions with purpose), defensible space is a desired *goal state*, and image and maintenance is a mixture of implicit goal state and task. We sometimes see 'Broken Windows' (Wilson and Kelling, 1982) added to the list when surely this should be described more generically and in task terms such as 'control of incivilities'. Another source of confusion is because some of the core activities are about people *preparing* the environment for themselves or others to undertake preventive tasks in the future – target hardening and creating defensible space. Others are mainly about *operational* prevention in the here and now – surveillance or access control. Others such as activity support or territoriality, are a combination. Design itself is, of course, preparatory.

This general laxity reflects the history of CPTED as a series of 'accretions' of ideas over time from various originators and schools (Jacobs (1961), Jeffery (1971), Newman (1972), Wilson and Kelling (1982)...) that have never fully been synthesised. The result is a layered, badly-stirred mixture rather than a well-prepared construction with reliably known properties.

### *Discourses of Environment and its contents*

An important but neglected aspect of CPTED, of course, is describing the *environment* (and the things in it), whether in generic terms or specifically related to crime. Apart from references to 'defensible space' and (for example) 'semi-public space', occasional use of architectural technical terms such as 'curtilage',<sup>4</sup> and 'targets', any kind of 'controlled vocabulary' is missing. I attempt a partial remedy of this in the next main section.

In fact, the vocabulary is positively out of control. Even the term 'target' is problematic. One of the core activities of CPTED is target-hardening. There are two distinct issues here. First, the term is too specifically linked to specific technical action, for quite often we come across *target-softening* activities.<sup>5</sup> These range from locks whose bolts do not resist force but deliberately swivel in their housing (so that hacksaws cannot get a purchase), to 'green walls' whose cover of leaves affords a poor canvas for graffiti (and which can be trimmed if the offenders persist). Second, it's not always clear what the target actually is. Consider two houses: one is broken into and burgled – here the target is the cash and valuables within. The other has its windows broken – here the target may be the windows themselves, if vandalism for 'fun' is involved; or the people inside, if this is an intimidatory attack. An alternative term could be 'creating crime-resistant enclosures'. This draws on the distinction developed in the Conjunction of Criminal Opportunity framework (DCLG, 2004: 10; Ekblom, 2010a) between *targets* (the property or people deliberately stolen, damaged or injured as the end goal of crime), *target enclosures* (safes, rooms, buildings or

compounds) and *wider environments* (the rest, but including for example transport interchanges, housing estates and shopping centres).

### *Discourses of Design*

Discourses vary on the design side, too. *Design* can itself be used in two ways: as *product* (e.g. 'we have incorporated this design in many houses') and as *process* (e.g. 'influencing the requirements capture stage'). Most casual police and local government users of CPTED tend to emphasise the product over the process, though the advanced ones are familiar with the latter and know when and how to insert crime risk and security requirements into discussions with planners, architects, developers and builders. (Whether they are allowed to do so is another matter.) The Dutch Police Label Secure Housing certification scheme (Jongejans, 2010) attempted to use Alexander's Pattern Language (Alexander et al., 1977). This was also recommended by Poyner (1983) (who additionally developed his own semi-graphical notation for crime pattern analysis), but examples in English are hard to find.

### **In more depth: a discourse for environmental design**

The first thing needed in developing a fit-for-purpose discourse for environment is to establish terms for fundamental qualities, or 'primitives'. In line with the mechanism approach, *causal properties*<sup>6</sup> can be considered the most fundamental. These, in interaction with other properties residing perhaps in offenders and guardians or other preventers, generate mechanisms that influence the probability of criminal events occurring. Those properties which increase it are *criminogenic*. Many act instrumentally, helping offenders pursue their goals. Alternatively, as described by Wortley (2008) criminogenic properties can act in a causally more direct way to *precipitate* crime by provoking, prompting, pressuring or permitting criminal behaviour (such as when a hot, crowded environment leads to a fight in a bar). Those properties that decrease criminal behaviour are *criminocclusive* (Felson, 1986; Ekblom and Sidebottom, 2007). In the background, but perhaps not fully woven in here, is Barker's (1968) ecological psychology concept of 'behaviour settings', which link regularities of place with regularities of behaviour.

### *Candidate properties*

Candidate causal properties for consideration as environmental 'primitives' can be identified which all relate, in one way or another, to the ecology of human action. These might include:

- Containment space – the causal property of containing people, places and objects;
- Movement space – the causal property of allowing people and objects to move or be moved;
- Manipulation/force – the causal property of allowing physical force to be applied to people, objects, built, landscaped or natural structures, whether conferred for example via space to wield force, or leverage points for using a crowbar;
- Perceivability – the causal property of allowing vision from micro/near to macro/distant perspectives (the latter is termed 'prospect');



- Enclosure – the causal property of separating off part of the environment from the rest (protection, refuge or shelter is part of this and indeed the ‘prospect-refuge’ axis is a significant concept in environmental psychology (see Appleton, 1975; Fisher and Nasar, 1992, who also add ‘escape’, which here falls better under ‘movement’);
- Understandability – the causal property of the environment to be ‘read’ and understood by users in navigating and behaving in it (ranging from inherently logical street patterns to explicit signage);
- Informativeness – the causal property of containing information referring usefully to other places, people and things (such as posters notifying of public meetings);
- Motivational/emotional influence – e.g. the causal property of prompting behaviours that assert defence behaviour, or engendering feelings of territoriality or fear;
- Interpersonal/intergroup – the causal property of engendering relationships of ownership, competition or conflict, ranging from thin apartment walls causing conflict over noise to unclear boundaries of public and private space.

These properties each have physical, psychological and social dimensions. They have been stated with *exterior* environments in mind, reflecting what could be seen as an arbitrary and unnecessarily limit to the scope of CPTED. But they pretty much apply to *interior* environments too.

### *Candidate features*

Some properties are inherent – for example the weight and bulk of a home cinema TV set renders it unlikely loot for a casual pedestrian burglar. Others are conferred by deliberate, distinguishable *features* of design, whether via *materials* (a wall coating resistant to graffiti) *structure and form* (such as a speed bump in the road) or *operating action* (for example, the way a gate swings shut. Features<sup>7</sup> are deliberate, distinctive means of conferring particular properties in the service of some purpose. Features do not always reside solely in a single product such as an item of street furniture or a building, but in a *configuration* (Ekblom 2004b) of several. For example, a window overlooking an alleyway, combined with a strategically-placed streetlight, could make surveillance possible.

*Security adaptations* are features that have deliberately been designed to confer security, whether on the designed object itself (making it a secure product), or on something else (a *securing* product (Ekblom 2010b) such as a public bench seat with places to hitch one’s bag). Structural features which seem relevant as possible primitives for understanding environmental aspects of crime and its prevention include:

- Nodes (destinations);
- Paths (both nodes and paths taken from the ‘pattern theory’ of Brantingham and Brantingham, e.g. 2008);
- Barriers (physical, visual);
- Screens (visual);
- Enclosures (containers, bags, vehicles (in instances of ‘theft from’ vehicles), gated compounds);
- Furniture (stands, hooks, seating...);

- Lighting ;
- Signage;
- Surfaces.

It's stating the obvious to say that environments *contain* things, and people; but such content can of course affect the properties of the whole configuration. Certain environments will, in turn, influence the content they come to contain, whether by design (as in a formal bike parking area) or unintentionally (as in an area with railings that gets appropriated by cyclists for 'fly parking'). Diversity defeats a definitive listing for the present, at least, but content can include:

- People's bodies (standing, seated or moving);
- Fixed furniture (seats, cycle stands, planters, traffic signs, utility boxes);
- Vehicles (parked or moving);
- Other potentially mobile property (such as a mass of coats on hooks which can obscure the view of the entrance of a bar).

How might this suite of causal property and feature terms work in practice? As an illustration we can home in on the task of *surveillance*: in particular, the causal property of *perceivability*; how features of the environment influence it criminogenically or criminocclusively; and whether they raise fear among users of the environment, or reassure them.

*Perception* in turn covers the various senses – here we take *vision*. Visual properties can be split into sightlines, lighting levels and quality, and background pattern.

- Taking first *sightlines*, features affecting this causal property of environment are diverse. They include dog-leg bends, screens, barriers, recesses and enclosures by way of geometric structure; transparency and reflectivity of materials; and regarding content, human/vehicular presence (such as crowds or traffic jams) and fixed furniture such as planters. These all help or hinder surveillance, but depending on context the surveillance in question may be undertaken by crime preventers of possible criminal behaviour, or by criminals of potential targets.
- On *lighting levels* (intensity) and *quality* (colour, contrast, direction, glare, fluctuation), the obvious features concern the disposition and nature of street lighting furniture, but also relevant are materials in terms of reflective surfaces, and content in terms of things such as bushes or parked vehicles which throw shadows, or nocturnal vehicles with dazzling headlights. Such features and properties may affect surveillance, perception and avoidance of threat, reporting and evidence-giving.
- Finally, on *background pattern*, this may be formed by choice of materials (e.g. bare brickwork versus concrete); surface cover (colour, pattern and later additions (e.g. posters and notices); and content (e.g. a background formed by the silhouettes of parked vehicles and dappled shadows of trees). Properties conferred or influenced might relate to prominence of targets, difficulty of spotting lurking assailants or potential victims passing by, or suitability as a visual backdrop for graffiti.

Similar exercises could be completed for each of the other primitive causal properties of the environment.

## Reconstruction

Having completed this heavy work on the foundations of CPTED, we can now start to reconstruct, from the base up, each of the core concepts, linking into more mainstream crime prevention ideas wherever possible, and occasionally extending beyond the bounds of traditional CPTED.

As said, it is helpful in each case to distinguish between *environmentally-oriented tasks and expressive actions*, versus *environmental properties and features* that support or hinder those tasks. The tasks are by definition undertaken by *crime preventers* (Ekblom 2010c, 2010a), who can be characterised by different *roles*: following the Crime Triangle (e.g. Clarke and Eck, 2003) we distinguish (as a minimum) *guardians of targets, managers of places and handlers of (potential) offenders*. These are roles for which someone or some institution, has taken responsibility, whether by virtue of specific employee duty or good citizenship (Felson, 2003), and whether permanently or momentarily.

We are familiar with the long-standing ‘fortress society’ criticism of CPTED, but in reality there are dark sides to each of the CPTED tasks. Because the environment is where we all live and act, good and bad alike, the relevant properties and features are often malevolently exploited by offenders, and may even be deliberately shaped by them for criminal ends. Offenders will certainly respond to preventive interventions by evolving countermoves.

Two aspects of CPTED literature that, due to their straightforward and useful nature, will be left unscrutinised are the distinctions between ‘natural’ versus ‘technical’ conduct of tasks (for example, direct human surveillance versus that assisted by CCTV), and formal versus informal.

Because the CPTED tasks all interrelate, both conceptually and in terms of affording each other practical support or realisation, much cross-reference is necessary (following a similar approach in Cozens et al. (2005). On the same grounds there is no obvious starting point in discussing them. Indeed, to make sense of the whole cross-referring suite, the reader should be prepared to read the list more than once, and to tolerate some repetition as different facets of the same concept are brought to view. Likewise the explicit parallel definition of both tasks and corresponding environmental properties makes for some (rather Jane Austen-like) repetition. But we must start somewhere, and that is with defence and defensibility, the most strategic of the core CPTED tasks.

### *Defence and defensibility*

The task of *defence* of some space, building, object or person is about controlling who can come in, when; once in, how the admitted people should behave; and when and how they should leave (for example, with dignity and in their own time, ejected peremptorily, with the ‘bum’s rush’; or led off in handcuffs). But caution is in order: there is a risk of being so over-inclusive with defence that the term becomes synonymous with ‘crime prevention’, an issue considered further under access control below. For defence to be a meaningfully distinguishable concept rather than a redundant one, defence and the defender role must be subsets of prevention and preventers respectively.

Defence can be viewed as both a preparatory and an operational task. Normally what triggers operational defence such as challenging the intruder or lowering the shutters is actual or anticipated theft, damage or occasionally violent attack. Defence of something moreover implies that the defender has, or at least assumes, rights of ownership, rights of exercise of defensive behaviour, and duties of responsibility. All of these social aspects overlap with territoriality, though as will be seen, the latter can be said to supply distinctive motivation and emotion.

Switching perspectives from task to causal properties, to call a particular space or environment '*defensible*' means, obviously enough, that it has the right instrumental properties to allow some defender (or preventer) to efficiently and effectively undertake the task of defence, whether at its periphery, at any walls or entrances, and in the interior. The last has not been explicitly picked up by CPTED although the concept of 'defence in depth' exists, mainly referring to nested (onion layer) enclosures.

Defensibility can be conferred (or denied) by physical aspects of buildings or landscapes themselves such as enclosure, surveillability of interior and exterior, controllability of access and ease of moving about once inside (for example, some Japanese castles have high steps favouring defenders rushing down but hindering attackers, running up). Defence thus seems a more strategic concept than access control and surveillance. For traditional CPTED to merely list 'defensible space' alongside these other core tasks tends towards mixing strategy and tactics.

Given that defence has social dimensions, as stated, the concept of defensibility must reflect these too. Indeed, physical barriers and enclosures are not strictly necessary for a space to be defensible. For example, features such as markers, symbolic barriers or colour changes in the roadway may indicate to defenders (preventers), potential offenders and third parties (making judgements about the appropriateness of defensive behaviour) where defence can, and might, begin. They may also give interpersonal force, and social entitlement and support, to acts of challenge and defence.

As is usual in crime prevention, the offender's *perception* of defensibility may, as much as any objective reality imposed by high walls etc, discourage and deter them from pressing home their attack. The same applies to their perception and objective experience of any overtly defensive behaviour on the part of owners and managers.

The performance of the task of defence is affected not only by the defensibility of the environment but the *capacity* of people to defend it through human resources (e.g. numbers, assertiveness, knowledge of how to challenge and respond) and technical resources e.g. alarms; and the *motivation*, some of which may be supplied by territoriality.

Defence sometimes leads to countermoves, whether immediate or involving preparation in turn. Offenders may bring tools and weapons to overcome resistance; also resources ranging from disguises to con-tricks and distractions. Offenders may wish to defend their own spaces too, for example drug dens or traditional hideouts as in the movie *The Ladykillers*. These have neatly been termed *offensible* space (Atlas, 1991). Felson (2003) identifies routine activity processes which generate 'offender convergence settings' which may then become modified by design.

*Access control and controllability of access*

The operational task of *access control* relates, self-evidently enough, to the discriminative control of *who* is allowed into a particular enclosure or otherwise demarcated territory, perhaps carrying *what* (weapons, contraband, cameras for hostile reconnaissance), to prevent their committing crime. The crime in question can be defined by their actions once within the space or occasionally by their presence (e.g. minors in a bar). CPTED concentrates on entry. Situational Crime Prevention (SCP), with 'exit screening', also covers egress and there's really no logical reason why CPTED should not too. Perhaps this task should be called *access/egress control*.

Egress control as a task is may serve defence of a particular space if ejection of intruders is involved. The situational prevention concept of 'exit screening' is broader in that it also includes protection of goods being stolen from a shop or warehouse, say. This arguably falls outside CPTED, although again the demarcation seems arbitrary. Whatever the case, the familiar 'messiness' of crime and crime prevention means that all aspects of egress control may contribute to defence. Offenders' *perception* that getting out with the loot or after an assault would be difficult, might serve to deter them from attempting entry in the first place.

*Controllability of access* is a causal property which depends on the configuration and nature of barriers and enclosures, and entry portals, whether equipped with rising booms, gates or merely a large, leather-clad bouncer blocking the entrance to the club with hand outstretched for one's proof of age.

Offenders have up their sleeves many *countermoves* to defeat the exercise of access control by place managers, or to manipulate the controllability of environments – fences can be cut, tickets can be forged, keys copied, security guards distracted or tricked. Offenders control access too: the speakeasy of the USA's Prohibition era springs to mind, with its shuttered peephole (at least in the movies) and passwords or recognition in-person, and more modern drug dens. Those discriminating on grounds of ethnicity or any other human distinction may seek to exclude particular people from particular places.

#### *Hardening of targets/enclosures, and hard targets/enclosures*

The first thing to recall here is the confusion sown by CPTED and SCP alike over what should be an important distinction between *targets* and *target enclosures* (Ekblom, 2010c). It may make more sense to class the task of hardening of *enclosures* as a subordinate means of defending the space so enclosed. Much of the apparently large difference between the phrases 'defensible space' and 'hardening of target enclosure' may stem from the incidental casting of the former in functional discourse and the latter in more technical terms. Clearly hardening of enclosures is part of defence, whether the defence is of the enclosure itself or of who or what lies within. There is a more ambiguous relationship with maintenance and image. Hardening supports maintenance, given that harder enclosures can be presumed to require less maintenance against damage – although if poorly designed, the presence of heavy covers, locks etc may make maintenance more burdensome. If done without regard to aesthetics, hardening can of course through overt fortification adversely affect image and thus feelings of community safety. On the other hand, the *semiotics* of hardening (Whitehead et al., 2008), conveying an explicit image of impregnability, can be used to discourage attack and thereby avoid damage from failed attempts.

Strictly, the hardness of *targets*, although central to SCP, should only fall within scope of CPTED if the targets themselves are parts of the built environment – houses to be protected from damage, walls from sprayed paint and so forth. Here, they act as direct objects of crime rather than in their capacity as enclosures. In this context, hardness contributes to defensibility although the original, Newman (1972), meaning probably refers more to defensible configurations of spaces and enclosures than to material defence. If practitioners and researchers think this difference of scope worth preserving, we could perhaps refer to *defensible spaces* and *defensible structures*.

*Hardening* refers to the (usually) preparatory preventive task intended to give targets and enclosures alike the property of *resistance to manipulation* by offenders in an attempt to achieve a whole range of criminal means and ends. The antonym is *vulnerability to manipulation* (see Ekblom and Sidebottom, 2007). The more usual phrase is perhaps ‘resistance to attack’, but this seems too narrow a concept for what offenders may want to do to/with the target or enclosure. Using the Misdeeds and Security framework (Ekblom 2005b), these can be summarised as *misappropriation* (stealing – of building material or contents), *mistreatment* (damage/harm), *misuse* (as tool or weapon e.g. a building feature such as a recess could be misused for ambush) or *misbehaviour* (in antisocial behaviour) that target itself or whatever it encloses. *Hardenability*, the capacity of targets and enclosures to be rendered resistant to manipulation by offenders, seems less useful as a counterpart concept here than plain *hardness*.

Using the term ‘manipulation’ has another advantage over ‘attack’, because it also enables us to include *softening* of targets and enclosures alongside hardening. Bolts whose shafts swivel in their housing and offer no purchase to hacksaws, green (plant-covered) walls against graffiti, anti-climb paint and ‘wheelie bins’ with soft lids to stop people using them as climbing aids<sup>8</sup> all resist manipulation yet are not ‘hard’. But, one has to admit, the term ‘hardening’ is snappy and familiar. Following Loewy’s<sup>9</sup> design principle of ‘most advanced yet acceptable’ hardening should for now assimilate softening,<sup>10</sup> though we may want to consider *resistance* of targets and enclosures as a more inclusive and generic alternative.

Offenders notoriously go equipped with all manner of tools intended to overcome the resistance of targets and enclosures. But they will sometimes wish to make their own enclosures resistant – for example, drug dealers or growers will want to keep the police (or other criminals) out.<sup>11</sup> They may even want to keep kidnap victims in.

### *Surveillance and surveillability*

Surveillance is an *operational task* which can be subdivided into a generic *script* (Cornish, 1994, Ekblom, in press) of watching, patrolling or remotely monitoring some building, interior or landscape, for the presence of some suspicious person or occurrence of suspicious behaviour; detecting possible suspicious behaviour; provisionally attributing innocent or criminal intent; investigating further; and/or making some escalatory response, whether to confront or arrest the person directly, take protective action such as locking down a building, report or summon assistance.

*Active surveillance* relates normally to the duties of guards or police patrols; also, perhaps, to vigilant repeat victims or nosy neighbours. *Passive surveillance* is where the preventer is not specifically looking for suspicious activity but happens to notice it when it occurs. It is

not a task per se, but refers to the *potential of people* to become active surveillers through their *presence* or remote access to information; their *perceptual/ judgmental capacity* (acuity, knowledge, skills, aids such as mirrors or CCTV); their *motivation*, and the surveillability properties of the *environment* they and the offender occupy.

When surveillance concerns some particular space (that someone owns or for which they are responsible) it may be undertaken in support of *defence*, which may or may not have *territorial* motives. Here it involves watching out for who is approaching, entering or moving about within that space, and what they are doing, leading, perhaps to some kind of control response.

*Surveillability* is an instrumental causal property of the *environment* strengthened or weakened by certain features, e.g. bends, recesses and lighting.

The offender's *perception* of active or passive surveillance may be criminocclusive in itself, deterring criminal action in advance or when under way. Even their perception of surveillability may have the same effect (where the offender notes the possibility, for example, that someone *might* be able to spot his misdeed from a particular window or CCTV camera).

Surveillance and even surveillability could also work more interactively, via *exposure*. For example, either of these could make the offender involuntarily *self-reveal* suspicious intent via their nervous appearance or uncertain actions. Self-revelation may even work by forcing offenders to direct their steps towards specific, limited vantage points where they can check out the security of a given site, but which are known to security staff, who may be explicitly on the lookout for such visits.

*Countersurveillance* is undertaken by offenders who may do things such as looking for security guards using a security mirror in the 'wrong', reverse direction, or wear hoodies or disguises to reduce the risk of recognition or recall. And of course, offenders themselves may undertake *criminal surveillance* during a crime (watching out for the approach of guards, for example, while the bank is raided) or advance hostile reconnaissance of their own.

#### *Activity support, places supportive of legitimate activity*

Activity support is a difficult concept to get to grips with. Cozens et al. (2005: 337) define it as involving 'the use of design and signage to encourage intended patterns of usage of public space'. Crowe (2000), however, refers to safe activities serving as magnets for ordinary citizens who may then act to discourage the presence of criminals. The first focuses on practical methods, the second more on mechanisms. It is helpful, therefore, to consider activity support as both a designed property of the environment, that encourages honest people and legitimate activities, and a task – one moreover that has both preparatory and operational aspects.

As a property of the environment, activity support variously alerts, informs, motivates, empowers and directs<sup>12</sup> honest people with intentions for legitimate activities to enter it and remain there as users. Once there, they act as crime preventers by virtue, for example, of their capacity for informal surveillance and response, the offender's perception of their potential to do so, and perhaps by simply crowding out the space for offenders and

offending. Things get more complicated when we try to connect the activity support concept to the environmental criminology concepts of *crime attractors* and *crime generators* (Brantingham and Brantingham, 2008). Attractors are places where offenders might otherwise deliberately go because of the crime opportunities they offer; generators merely cause crime by virtue of 'routine activities' and paths bringing offenders, targets and victims together in particular places. Activity support mechanisms, if operating as intended, would seem to reduce crime attraction by supply of potential preventers. But crime generation is more dependent on particularities of people, activities and context. It may actually be increased if these particularities facilitate collisions, confrontations and thefts from the person. Alternatively it may be decreased if people numbers block opportunities, and particular paths, nodes and land uses channel users away from conflict over space, noise, incompatible behaviour, group rivalry and so forth.

Preparatory activity support tasks may involve establishing the 'right' kinds of shop, places of entertainment etc. to attract the right kinds of people and activity. Operational activity support could include, for example, having street entertainers present to attract families into the site, or even police patrolling. Designing environments (rather than directly influencing their mobile content) to facilitate activity support might include incorporating public seating where mature people could undertake informal surveillance or social control.

Is there a dark side to activity support? Public seating in the wrong location or social context could focus antisocial behaviour by giving young people a place to hang about. Groups of criminals can deliberately crowd out micro-spaces as a perpetrator technique for pickpocketing. Drug dealers may set the tone of activities in the areas where they are based; the Broken Windows hypothesis (Wilson and Kelling, 1982) envisages a process that could work either negatively ('downward spiral' of incivilities leading to reduced presence and courage of preventers on the streets leading to more serious crime) or positively. There is much overlap here with 'image and management/maintenance', covered next. Criminal (or merely antisocial) countermeasures may involve intimidating honest users so they avoid a given place, perhaps at night.

### *Image and image control, and Management/Maintenance*

The task of controlling (or at least influencing) the image of a particular site is often lumped together, in guidance materials, with that of management and maintenance.. But one is a state, the other an activity – how do they actually relate? Maintenance can serve the purpose of image control, but equally, image control can be just one of the many purposes of maintenance. Management and maintenance clearly overlap but the former is more strategic and all-encompassing. Indeed, with the Situational Prevention concept of 'place managers', management includes the human side of place-focused prevention, and that in turn includes surveillance. For brevity, I will simply refer to 'maintenance' in what follows, emphasising the management of the environment more than of the employees and other people, and general business processes, within it.

*Image* is an individually/collectively held and enduring global perception with emotional content, of a given distinguishable site or building. For present purposes image relates primarily to crime risk and wider community safety/quality of life issues. Beyond a simple probabilistic consideration it extends to cover more 'causal' perceptions and attributions



*predictive* of crime risk, such as the reputation for criminal intent of its residents and users. There may be benefit in distinguishing *self* image of residents and users, from *outsider* images.

Image could affect crime in several ways. It could attract or repel particular kinds of people, with individual criminal predisposition or collective subculture, to live and work in the site in question; or merely those wealthy enough to attract visiting offenders. It could influence the *behaviour* of residents or visitors, whether relaxing or raising their preventive activities such as removing valuables from cars, pumps from bicycles etc., or challenging strangers. It could influence the *emotions* of residents or visitors too, the obvious example being the fear of crime. And it could influence *community-level processes* of social cohesion and collective efficacy, or on the negative side, tolerance and permission for offending.

*Management* is a task which may affect all kinds of crime *opportunity* afforded by the environment. Shortcomings in management range from broken locks to signs of inoccupancy such as overgrown gardens (Armitage, 2000). Likewise inadequate management may provide a range of crime *precipitators* (Wortley, 2008), situational factors which prompt, provoke or permit offending, for example through 'broken windows'-type processes.

*Maintenance*, as an aspect of the management task, can be preparatory (as with preventive maintenance), or operational, as with cleaning graffiti from a wall. Maintenance may affect image by controlling (or failing to control) particular visible signs of crime or (in)security; this would normally be a relatively slow, cumulative process but occasional 'horrific' events may change an area's reputation overnight. The very perception of whether or not a site is *being maintained and more generally managed* may itself be an important component of its image (Painter and Farrington, 1997), and this is part of the Broken Windows hypothesis.

*Manageability* of an environment is at the pivot-point between efficiently heading off crime problems by advance planning, design and preparation, versus conferring flexibility to adapt to changing crime problems and site use in real, operational time; between capital and running costs; and between private and public costs in terms of victim, police and Criminal Justice expenditure. CPTED should therefore pay close attention to getting this property right. However, manageability is so broad a concept (including defensibility and surveillability for example) that it may not be very useful except as a very high-level indicator of the degree of control that individuals, institutions or communities can exercise over it. *Maintainability* is a far more specific causal property, heavily-influenced by design.

On the dark side, vandalism and graffiti certainly affect image, and cause more work for those responsible for maintenance. But in a few cases there may be a deliberate, concerted attempt to control image for antisocial or criminal ends. One instance is gang-related graffiti. Another is where a locality has acquired a reputation for possible illegal activities such as gambling or prostitution. Likewise, the opposite of maintenance – interfering with the functioning of security equipment ranging from fencing and locks to the wiring of alarms and CCTV – may be part of the criminal repertoire.

#### *Territoriality, territorial behaviour and territory*

Territoriality is arguably the most complex of the CPTED concepts. As used in CPTED practice and literature, it is unclear whether it is a socially-ascribed and physically-delineated and

supported *property of space* or a *human attribute*. With the latter it could be both a *value* in itself (an Englishman's home is his castle), *expressed* in various kinds of emotionally-charged behaviour such as putting up signs of ownership or challenging intruders; and an *instrumental task* to crime prevention (and other) ends. The alternative phrase 'territorial reinforcement' (e.g. Cozens et al., 2005) suggests a *preparatory task*, but territoriality includes *operational* tasks too (such as going out and challenging the stranger sleeping in one's shop entrance). As ever, on both theoretical and practical grounds it would appear best to consider it as all of these, subsumed under an ecological framework which includes human agents in relation to their environment. But we have to split the terms into *territoriality*, *territorial expression*, *territorial control* and plain *territory*.

On the human side, aspects of *territoriality* have long been written about, ranging, for example, from Ardrey's (1966) 'territorial imperative' (where the space that is claimed is fixed) to Sommer's (1969) 'personal space' (where the defended zone moves with the person). For present purposes we do not need to follow the arguments and critiques in detail, or debate how far territoriality is a common human characteristic best understood as originating through evolutionary psychology although individually and culturally expressed. A rough, and inclusive, sketch map will suffice to begin opening up the concept for CPTED. We can make the following, conservative, statements about it.

Territoriality is a complex *propensity* of perceptual, emotional and motivational tendencies, goals and resources leading to *territorial behaviours* of acquisition, preferential enjoyment, ownership, management, control and defence of a tract of space. These processes may operate individually or collectively at group, community, institutional or national level. Although a common human propensity territoriality may be realised and communicated differently by different individuals and/or (sub)cultures, particularly with regard to the balance of the individual to the collective.

Territory is held *relative to other possible owners*. This introduces into territoriality, relations of either *acceptance/legitimacy or conflict* between private parties, or additionally with the involvement of the community and/or state; likewise, *cultural understandings* of concepts of ownership, norms (and laws) of legitimate acquisition, use, defence etc. The concepts, and the practical definitions of public, semi-public and private space (Newman, 1972) are likely to be culturally determined. Territoriality also requires particular *roles* to be understood: owner, occupier, visitor, intruder and so forth. *Sharing* of territory will pose particular issues of its own.

Territorial behaviour splits into *territorial expression* and the instrumental task of *territorial control*, though these are analytic distinctions and most instances will involve both in differing proportions. At one end of the scale we have, say, the spontaneous anger manifested when discovering some squatters have invaded one's home; at the other, a more rational and planned attempt to control who comes into one's territory and what they can do there. In support of territorial control, the owner or manager has at their disposal all the preparatory and operational tasks of CPTED and Situational Prevention. Conversely, all the tasks of CPTED acquire a motivational boost if territoriality is awakened and reinforced.

On the *environmental* side, *territory* is, obviously enough, extended in space and over some (brief or lasting) time period. It may extend into virtual or cyber space. It will usually have properties relating to *utility to users*, either for *its own sake* (a private garden to enjoy) or as an *enclosure* to secure their person and belongings. In both cases it has the capacity to

prompt or provoke feelings, motives and actions of territoriality. For territory to be meaningful in practice it has to have the properties of *identifiability* (whose is it?) and *demarkability* (where is it/what are its boundaries?). It may also have properties of *defensibility* (including *access control*), which may be facilitated by *surveillability* and *hardening of enclosure*. It will have an *image* to the owner and/or to other parties, whether or not deliberately expressed and portrayed. Its demarking features will usually require *maintenance*. Maintenance may even extend beyond the physical and informational structure to include regular demonstration of ownership and occupancy (the human equivalent of territorial birdsong).

All the above properties may be influenced for good or for bad by the design of the environment on micro to macro scales, in interaction with the social context. That design, of course, may range from the architect planning gardens and walls to the householder painting their house a distinctive colour and putting up 'beware of the dog' notices. Both territorial properties and territoriality may motivate or empower owners/managers to *influence* other people, perhaps through activity support; they may also cause visitors to *accept* such influence. Feelings of territoriality by both owners and visitors may be prompted by a range of environmental features, including the self-same barriers that support defensibility. Shaping the environment to do all these things can use the existing term, *territorial reinforcement*. This is could most helpfully refer to preparatory tasks undertaken relatively remotely by designers, architects or planners, and intended to motivate and facilitate territorial control by the end owners and users of that territory. That control in turn may involve both preparatory and operational tasks of its own.

On the dark side, we have already encountered 'offensible space' with an obvious instrumental territorial component; and gang territories, which may well have a more emotional aspect. Territorial challenges and conflicts over fencing, entry of pets or farm animals (even weed seeds) may lead to violence in some cases. Territorial signs and markers, whether private or some kind of authority symbol, are common targets for defacement; at the opposite extreme from antisocial behaviour, causing destruction in and of 'iconic' places (Clarke and Newman, 2006) is a frequent goal of terrorism, and the image of bomb-damaged buildings a target vehicle (Roach et al., 2005) for conveying messages to various audiences.

## Conclusion

We have seen how it is possible to deconstruct, and start to reconstruct, the core concepts of CPTED, with reference to various underlying elements, relating primarily to 'classical' Situational Crime Prevention, the newer 'crime precipitation' (Wortley, 2008) and the Conjunction of Criminal Opportunity. Through attempting definition in depth we have revealed more of the underlying subtlety and complexity of the CPTED concepts, and further highlighted some superficialities and confusions in the everyday usage of practitioners and researchers. Some tasks, like access control, have come through the scrutiny relatively unscathed; others, like target hardening, have taken a drubbing; still others, like territoriality, have had additional richness revealed. We have also seen the importance of distinguishing between on the one hand, *environmental causal properties* variously conferred through designed *features, materials* and human or material *content*; and on the other instrumental *tasks, both preparatory and operational, and expressive behaviours*. We

have discovered how the different tasks and environmental properties interrelate – sometimes in a means-end way, in either direction; sometimes even in conflict. I have made some moves towards re-defining and sometimes re-labelling the core concepts of CPTED, but have held back from proposing a final, definitive suite until further debate has (hopefully) taken place.

Finally, there has been some systematic airing of the *dark side* of environmentally-oriented tasks and behaviours and environmental properties, in terms of both criminal counterexploitation and criminal countermoves. No CPTED analysis should be considered complete without these, or without attention to the dynamic interactions of scripts and script clashes between offender and preventer roles.

Hopefully the project of updating and upgrading CPTED has been advanced by these improved understandings and attempted reconstructions. But the project is far from complete.

Terminologically, I have not sought, here, to produce a final suite of formally-stated definitions, reserving that for a period of debate and reflection which I hope others will engage in. (At the very least, the other papers in this issue give plenty of food for further reflection in this respect.) On a more specific point we may need to consider a suite of *antonym* terms for all the CPTED ones to give a consistent discourse for design/ constructional *weaknesses*. We began this process with *vulnerability to manipulation* versus *resistance to manipulation*, but the whole suite of CPTED terms could benefit from similar treatment. We could also attempt a more systematic and compact reorganisation of the whole rather than purely of the individual concepts, as there remains much redundancy in the terms used.

Improved verbal articulation of CPTED concepts is necessary but not sufficient. An important domain of discourse for architects and designers in particular is graphic representation. As Gamman and Pascoe (2004) argue, visual representation as a whole is conspicuously neglected in the general crime prevention world, though singularly powerful in communicating design ideas. But those publications (such as *Safer Places*, the UK guide to crime prevention and the planning system (ODPM, 2004)) which do provide copious visual material still do so almost exclusively in the form of photographs, or occasionally layout plans. There is much benefit from photographic representation of designs and layouts, but I think it will be worth exploring the possibilities of diagrammatic language or notation to help abstract and communicate at the level of concepts and principles.

In terms of scope, there is further work to be done to take on the facilitation of positive cohesion, access and inclusion emphasised in Second Generation CPTED. But the aim would be to pursue this in a searching and critical manner that clearly focuses on well-defined causal mechanisms. It should also clearly confine itself to Environmental Design rather than, as sometimes seems to be the case, spread itself so widely that CPTED has sometimes been used as a synonym for the whole of place-based Crime Prevention.

But these are for another time. For the present, my aspiration has been mainly to stimulate discussion. Those interested in doing so should visit <http://reconstructcated.wordpress.com>.

## Notes

1. For example,  
[www.cen.eu/cen/Sectors/TechnicalCommitteesWorkshops/CENTechnicalCommittees/Pages/Standards.aspx?param=6306&title=CEN/TC%20325](http://www.cen.eu/cen/Sectors/TechnicalCommitteesWorkshops/CENTechnicalCommittees/Pages/Standards.aspx?param=6306&title=CEN/TC%20325)
2. See e.g. [www.controlledvocabulary.com](http://www.controlledvocabulary.com).
3. Various attempts to define crime prevention are discussed in Ekblom, 2010a.
4. An enclosed area occupied by a dwelling, grounds, and outbuildings.
5. See Wortley (1996) for a wider situational interpretation of 'soft' interventions.
6. It's unfortunate that the English language confuses property meaning 'owned goods' with that meaning 'owned places' and also 'certain capacities to cause' – though where interpretation is ambiguous, the last can be indicated by adding the qualifier 'causal'.
7. Note that, in the body of the text of Ekblom and Sidebottom (2007), 'features' was given a meaning which is here referred to as 'properties'. The change of meaning was referred to in the end notes of that article, but came too late to revise the entire document. Such are the perils of terminological development.
8. See Loqvist's concept design for a 'No ClimBIN' at [www.designoutcrime.org](http://www.designoutcrime.org).
9. [www.raymondloewy.com/about/bio.html](http://www.raymondloewy.com/about/bio.html).
10. For a discussion of assimilation versus accommodation of terms and concepts in crime prevention see Ekblom, 2010a.
11. Battering rams used in police raids create a pleasing symmetry.
12. From the CLAIMED framework for mobilising preventers – Ekblom, 2010a.

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