

Crime Prevention Guide



Crime Prevention Through Environmental Design

- **Crime is a social problem in our society that affects thousands of people's lives each year** Serious crimes against persons and properties generate considerable fear within the community.
- **Crimes like theft, break-in, and murder are serious threats to the safety of the community.** The resulting fear of crime in itself can restrict people's freedom of movement and prevent them from fully participating in the community. **In particular, some groups of people are more vulnerable to crime and the fear of crime, for example, older people, women, parents, teenagers, etc.**

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- **Many different strategies are needed to combat the complex issues of crime and fear of crime.** A whole range of responses involving strategies in design, community action and law enforcement would be required to achieve successfully the objective of crime prevention.
- **In this connection, there is widespread acknowledgement that planners, architects and developers can play an important role in enhancing the safety of our communities.**

Crime Prevention Through Environmental Design



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- Traditionally, the community has turned to the police and the judicial system to protect them by deterring criminals and punishing offenders. The general public's indifference towards self-protection arises mainly from the lack of knowledge of the means of protection, and perhaps a perception that somebody else - the government or insurance companies - bears most of the cost of theft and vandalism.

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- **On the other hand, Crime Prevention Through Environmental Design (CPTED) asserts that the community, homeowners, planners, developers and architects can play a greater role in protecting the community and themselves from crime by integrating CPTED principles and concepts into the design and management of the physical environment.**
- **In this connection, CPTED may be viewed as a subset of the total set of measures required for effective crime prevention and control.**

Crime Prevention Through Environmental Design



Crime Prevention Through Environmental Design

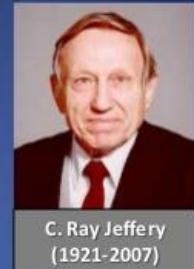
- CPTED was originally coined and formulated by criminologist C. Ray Jeffery. A more limited approach, termed defensible space, was developed concurrently by architect Oscar Newman. Jeffery's book, "Crime Prevention Through Environmental Design" came out in 1971, but his work was ignored throughout the 1970s. Newman's book, "Defensible Space: - Crime Prevention through Urban Design" came out in 1972. His principles were widely adopted but with mixed success. The defensible space approach was subsequently revised with additional built environment approaches supported by CPTED.

Criminologist C. Ray Jeffery



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- **CPTED** (*sĕp'-tĕd*) – direct controls over environmental conditions to preclude the occurrence of crime
- Closely related to Newman's "defensible space" but more diverse and less 'territorial'
- Three interrelated strategies
 - Access control / target hardening: limit opportunity
 - Organized; mechanical; natural
 - Surveillance: observational monitoring
 - Territorial reinforcement: sense of ownership



C. Ray Jeffery
(1921-2007)

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1960s

- In the **1960s Elizabeth Wood** developed guidelines for addressing security issues while working with the Chicago Housing Authority, placing emphasis on design features that would support natural surveillability. Her guidelines were never implemented but stimulated some of the original thinking that led to CPTED.

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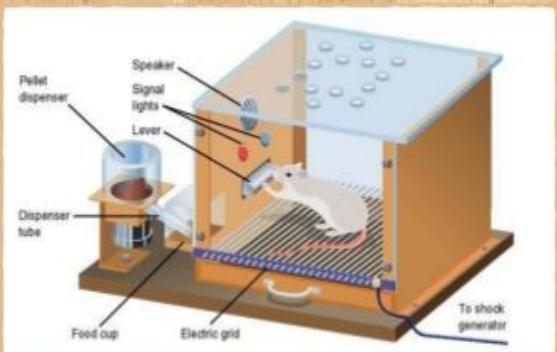
1970s

- The phrase crime prevention through environmental design (**CPTED**) was first used by **C. Ray Jeffery**, a criminologist from Florida State University. The phrase began to gain acceptance after the publication of his 1971 book of the same name.
- *Jeffery's work was based on the precepts of experimental psychology represented in modern learning theory.* (Jeffery and Zahm, 1993:329) Jeffery's CPTED concept arose out of his experiences with a rehabilitative project in Washington, D.C. that attempted to control the school environment of juveniles in the area. Rooted deeply in the psychological learning theory of **B.F. Skinner**, Jeffery's CPTED approach emphasized the role of the physical environment in the development of pleasurable and painful experiences for the offender that would have the capacity to alter behavioural outcomes.

B.F. Skinner, Jeffery's CPTED approach emphasized the role of the physical environment in the development of pleasurable and painful experiences for the offender

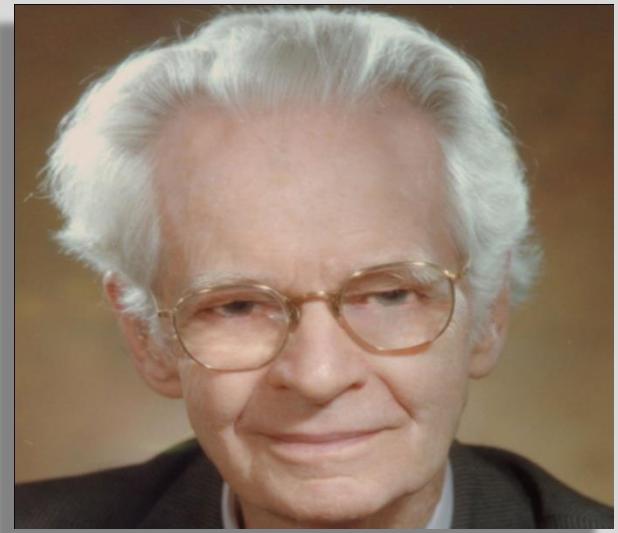
The Skinner Box

Skinner's operant conditioning chamber (also called a Skinner Box) was designed to teach rats how to push a lever. This behavior is not natural to rats, so operant conditioning with positive and negative reinforcement were performed in order to teach the behavior.

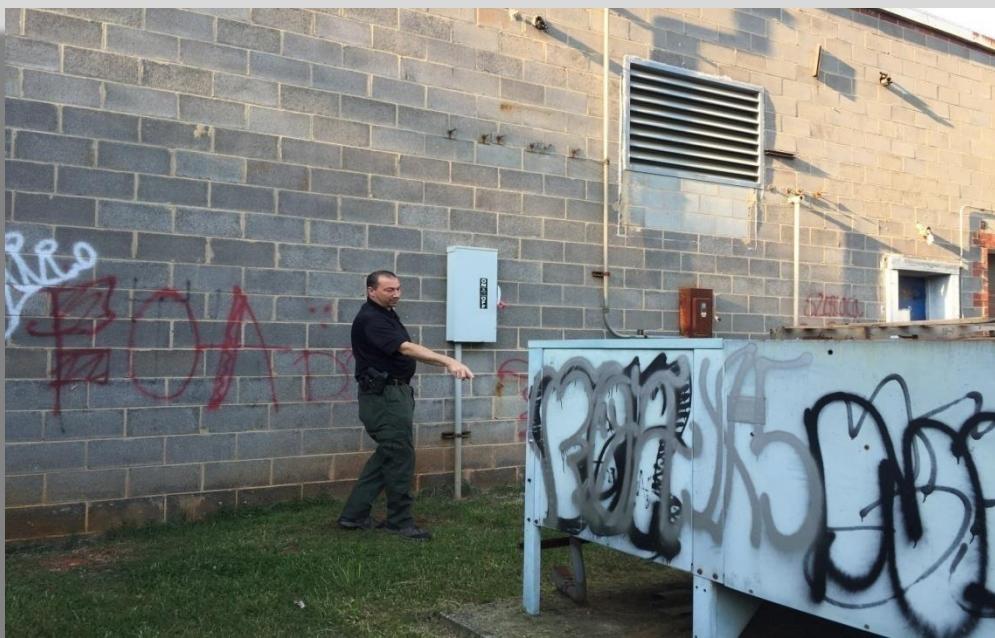
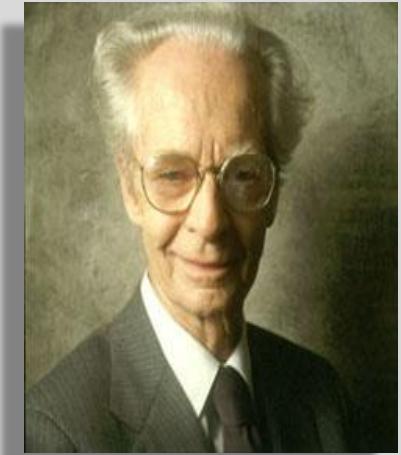


Positive Reinforcement:
A rat was awarded with food when he pressed the lever.

Negative Reinforcement:
A rat was able to turn off electric shocks produced by the floor by pressing the lever.



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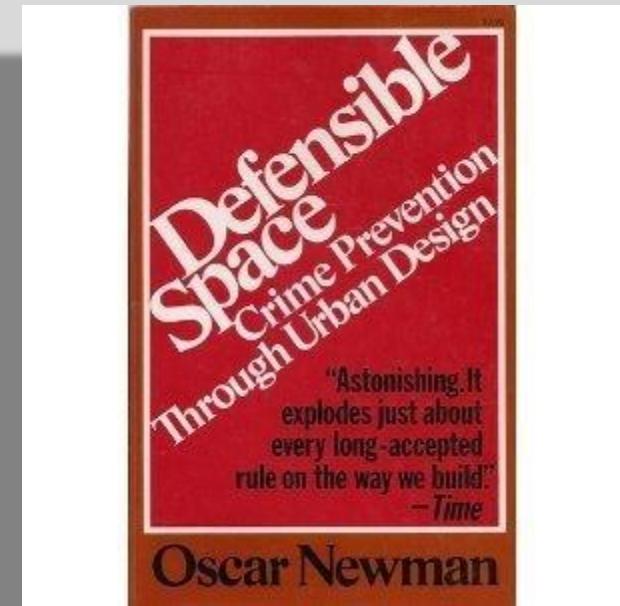
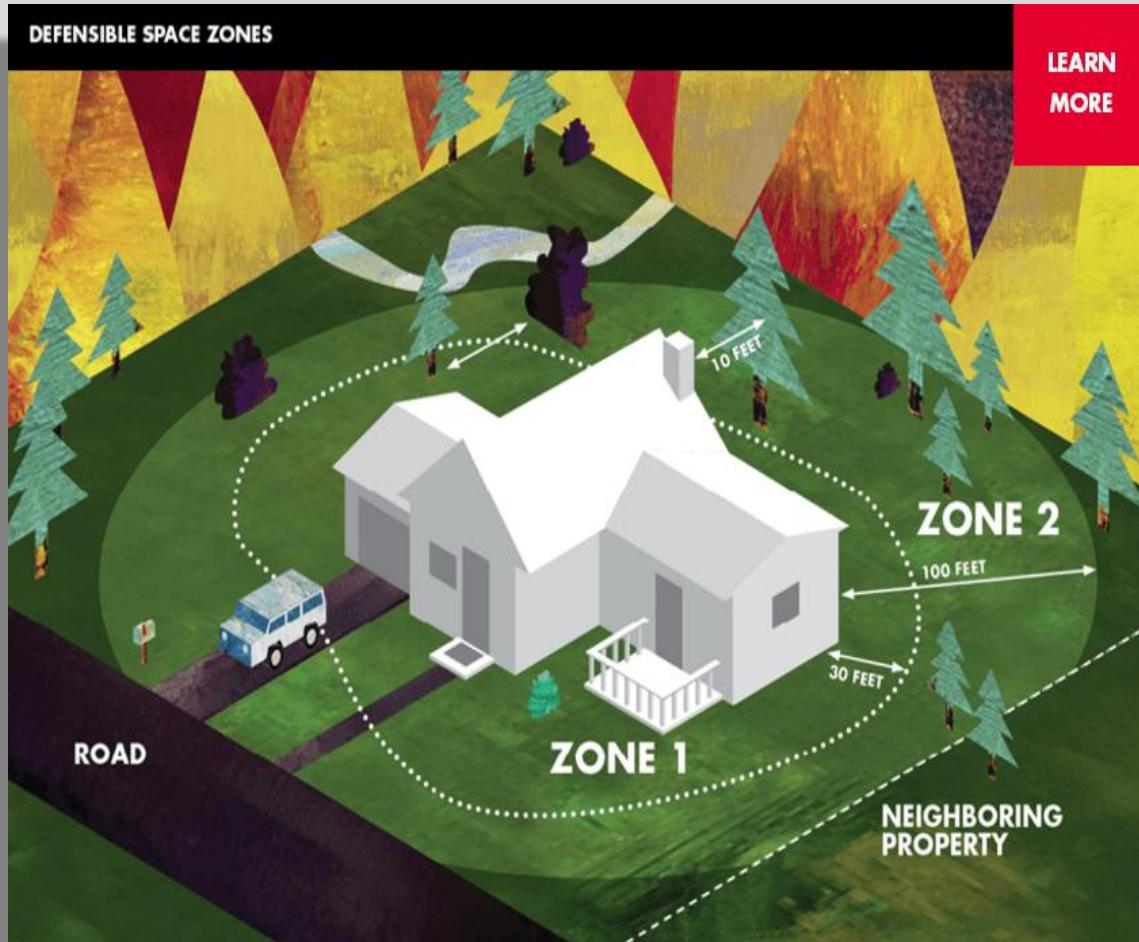
Crime Prevention Through Environmental Design

- **Defensible space design tools were observed to be marginally effective in institutional and commercial settings.** As a result, Newman and others moved to improve defensible space, adding CPTED based features. They also deemphasised less effective aspects of defensible space. Contributions to the advance of CPTED in the 1980s included:
- The "broken windows" theory, put forth by James Q. Wilson and George L. Kelling in 1982, explored the impact that visible deterioration and neglect in neighbourhoods have on behaviour. Property maintenance was added as a CPTED strategy on par with surveillance, access control and territoriality.

Defensible Space

- *Residential environment whose physical characteristics—building layout and site plan—function to allow inhabitants themselves to become key agents in ensuring their security.*" He goes on to explain that a housing development is only defensible if residents intend to adopt this role, which is defined by good design: "Defensible space therefore is a socio-physical phenomenon," says Newman.
- The theory argues that an area is safer when people feel a sense of ownership and responsibility for that piece of a community.
- **If an intruder can sense a watchful community, he feels less secure committing his crime. The idea is that crime and delinquency can be controlled and mitigated through environmental design**

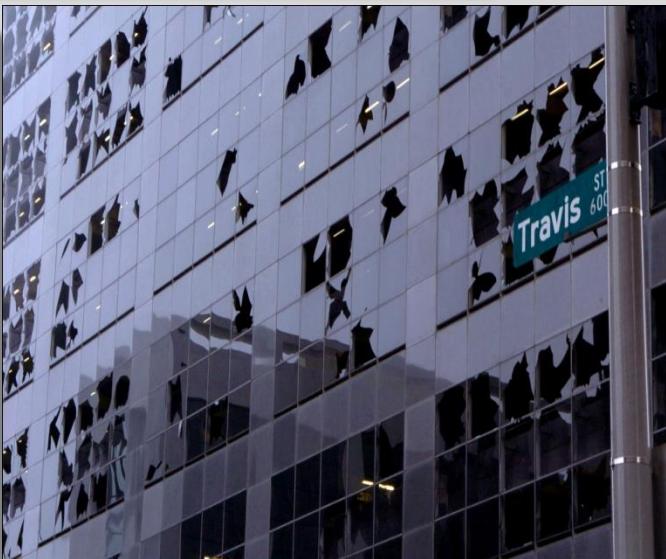
Crime Prevention Through Environmental Design



Crime Prevention Through Environmental Design

- The Broken Windows theory may go hand in hand with CPTED. Crime is attracted to the areas that are not taken care of or abandoned. CPTED adds a pride of ownership feeling to the community. With no more "broken windows" in certain neighbourhoods, crime will continue to decline and eventually fall out completely.

Broken Window Theory



- The theory simply states that something like an abandoned building with a broken window signals a careless attitude toward property, and therefore an absence of respect for the law.
- The “broken window” is the first step in a neighborhood’s slow deterioration and as times goes on there will be other show of abandonment and decay – such as “more broken windows, trash accumulation, graffiti and abandoned cars” (Adams, J. 2006).

Crime Prevention Through Environmental Design

1990s

- Criminology: An Interdisciplinary Approach (1990), was Jeffery's final contribution to CPTED. The Jeffery CPTED model evolved to one which assumes that
- *The environment never influences behaviour directly, but only through the brain. Any model of crime prevention must include both the brain and the physical environment.* Crime Prevention Through Environmental Design (1991) by criminologist Tim Crowe provided a solid base for CPTED to move forward into the rest of the 1990s.

Crime Prevention Through Environmental Design

2000s

- As of 2004, elements of the CPTED approach have gained wide international acceptance due to law enforcement attempts to embrace it. The **CPTED term "environment" is commonly used to refer to the external environment of the place.**

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN PRINCIPLES

- The basis of Crime Prevention Through Environmental Design (CPTED) is that proper design and *effective use of the built environment can reduce the incidence and fear of crime.*
- This in turn leads to improvements in the quality of life.

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN PRINCIPLES



CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN PRINCIPLES

- **From 1994 through 2002, Sparta Consulting Corporation led by Severin Sorensen, CPP managed the US Government's largest CPTED technical assistance and training program titled Crime Prevention Through Environmental Design (CPTED) in Public Housing Technical Assistance and Training Program, funded by the US Department of Housing and Urban Development.**
- **The Sparta led CPTED projects showed statistical reductions in self reported FBI UCR Part I crimes between 17% to 76% depending on the basket of CPTED measures employed in specific high crime, low income settings in the United States.**

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN



CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN PRINCIPLES

- In contrast to the approach of addressing crime concerns by implementing visually affronting security or target hardening measures such as locks, hard barriers, security gates, security patrols, etc., CPTED promotes high quality and visually pleasing solutions as first responses that aim to enhance the legitimate use of space.
- CPTED can be applied without interfering with the normal use of the space. It is easy to apply and can be economical to implement, especially if it is done early at the planning and design stages of a project.

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN PRINCIPLES



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CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN PRINCIPLES

- **THE FOUR PRINCIPLES OF CPTED ARE:**
- *Natural surveillance*
- *Natural access control*
- *Territorial reinforcement*
- *Maintenance and management*

NATURAL SURVEILLANCE

- *The fundamental premise is that criminals do not wish to be observed. Surveillance or the placing of legitimate ‘eyes on the street’ increases the perceived risk to offenders.* This may also increase the actual risk to offenders if those observing are willing to act when potentially threatening situations develop. So the primary aim of surveillance is **not to keep intruders out** (although it may have that effect) but rather, to **keep intruders under observation**.
- *Natural surveillance can be achieved by a number of techniques. The flow of activities can be channelled to put more people (observers) near a potential crime area.* Windows, lighting and the removal of obstructions can be placed to improve sight lines from within buildings.

NATURAL SURVEILLANCE

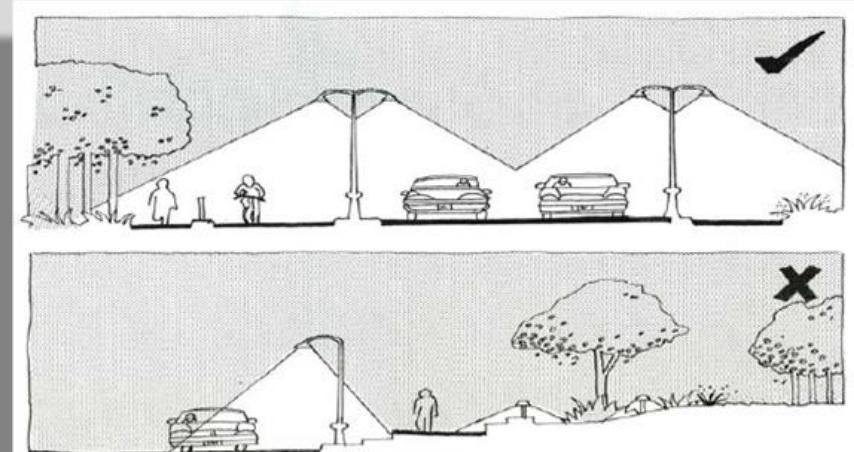
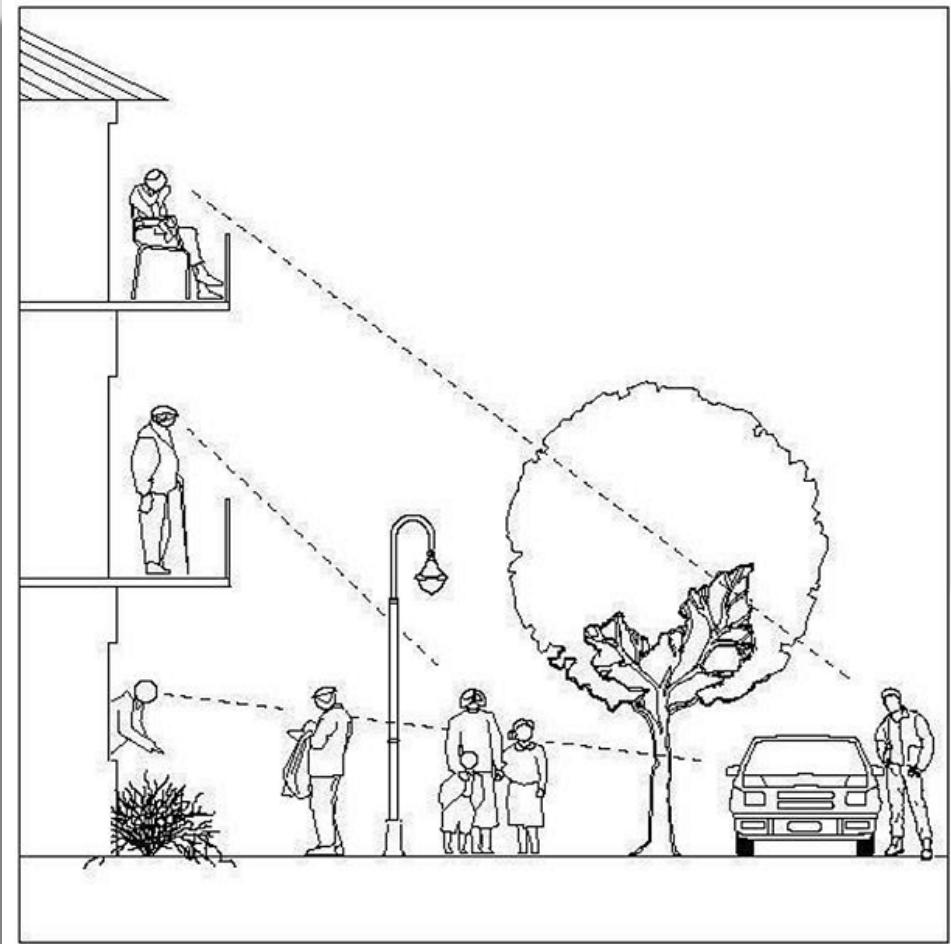
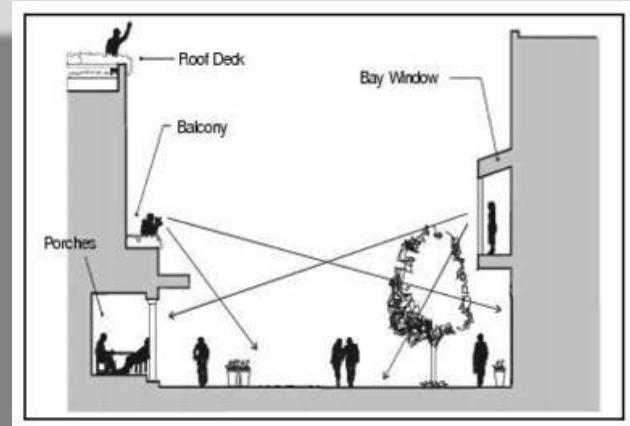


Figure 2. Lighting design is to provide safe levels of visibility



NATURAL ACCESS CONTROL

- *Natural access control relies on doors, fences, shrubs, and other physical elements to keep unauthorised persons out of a particular place if they do not have a legitimate reason for being there.* In its most elementary form, access control can be achieved in individual dwellings or commercial establishments by the use of **adequate locks, doors and window barriers.**

NATURAL ACCESS CONTROL



NATURAL ACCESS CONTROL

- However, when one moves beyond private property to public or semi-public spaces, the application of access control needs more care. Properly located entrances, exits, fencing, landscaping and lighting can subtly direct both foot and vehicular traffic in ways that decreases criminal opportunities. Access control can be as simple as locating a front office to a warehouse.

NATURAL ACCESS CONTROL



NATURAL ACCESS CONTROL

- While access control is more difficult on streets and areas that are entirely open to public use, there are other techniques for controlling access in these circumstances. For example, nonphysical or ‘psychological’ barriers
- Can be used to achieve the objective of access control.
- These barriers may appear in the form of signs, paving textures, nature strips or anything that announces the integrity and uniqueness of an area.
- The idea behind a psychological barrier is that if a target seems strange, or difficult, it may also be unattractive to potential criminals.

NATURAL ACCESS CONTROL



TERRITORIAL REINFORCEMENT

- People naturally protect a territory that they feel is their own, and have a certain respect for the territory of others. Clear boundaries between public and private areas achieved by using physical elements such as fences, pavement treatment, art, signs, good maintenance and landscaping are ways to express ownership. Identifying intruders is much easier in such well defined spaces.
- Territorial reinforcement can be seen to work when a space, by its clear legibility, transparency, and directness, discourages potential offenders because of users' familiarity with each other and the surroundings.

TERRITORIAL REINFORCEMENT



MAINTENANCE AND MANAGEMENT

- This is related to the neighbourhood's sense of 'pride of place' and territorial reinforcement.
- *The more dilapidated an area, the more likely it is to attract unwanted activities.* The maintenance and the 'image' of an area can have a major impact on whether it will become targeted.

MAINTENANCE AND MANAGEMENT



MAINTENANCE AND MANAGEMENT

- With clear spatial definitions such as the subdivision of space into different degrees of public/ semi-public/ private areas and the raising of standards and expectations, the level of social estrangement would decline. This is known to be related to reduction in opportunities for aberrant or criminal behaviour, such as vandalism.

MAINTENANCE AND MANAGEMENT



THE “THREE D” APPROACH

- Conceptually, the four CPTED principles are applied through the 3-D approach, i.e. **Designation, Definition and Design.** The 3-D approach is a simple space assessment guide that helps the user in determining the appropriateness of how a space is designed and used. The 3-D concept is based on the three functions or dimensions of human space:

THE “THREE D” APPROACH

- By using the “Three D’s” as a guide, space may be evaluated by asking the following questions:

1. DESIGNATION

- • What is the designated purpose of this space?
- • For what purpose was it originally intended?
- • How well does the space support its current use or its intended use?
- • Is there a conflict?

THE “THREE D” APPROACH



THE “THREE D” APPROACH

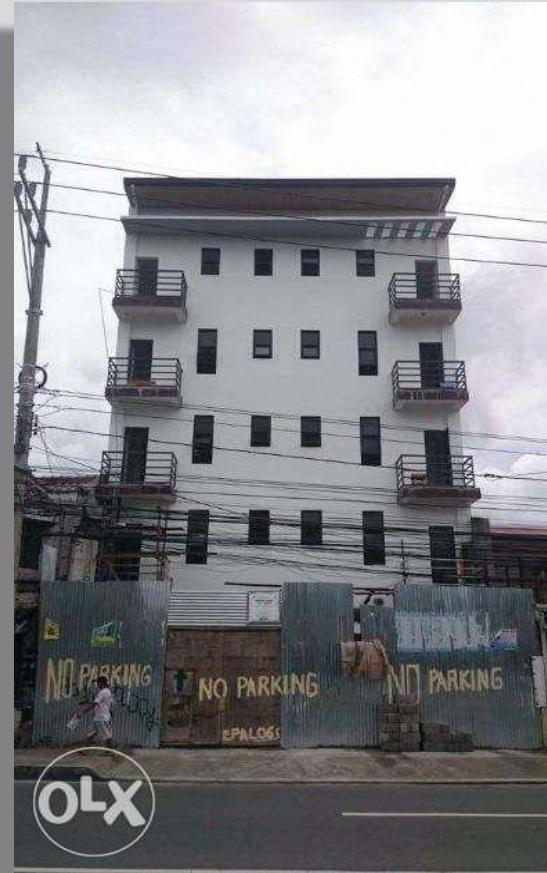
2. DEFINITION

- • How is space defined?
- • Is it clear who owns it?
- • Where are its borders?
- • Are there social or cultural definitions that affect how space is used?
- • Are legal or administrative rules clearly set out and reinforced in policy?
- • Are there signs?
- • Is there conflict or confusion between purpose and definition?

THE “THREE D” APPROACH



THE “THREE D” APPROACH



THE “THREE D” APPROACH

3. DESIGN

- How well does the physical design support the intended function?
- How well does the physical design support the desired or accepted behaviours?
- Does the physical design conflict with or impede the productive use of the space or the proper functioning of the intended human activity?
- Is there confusion or conflict in the manner in which physical design is intended to control behaviour?

THE “THREE D” APPROACH



**Before CPTED
Improvements**

**After CPTED
Improvements**



THE “THREE D” APPROACH



THE “THREE D” APPROACH

Guiding Principles for Safe Design

Taken from crime prevention through environmental design (CPTED) and prospect and refuge design theory

- **Natural Surveillance**

- Visibility of others and visibility by others

- **Control and Choice**

- Known entrances and exits
- Ability to escape

- **Legibility & Coherence**

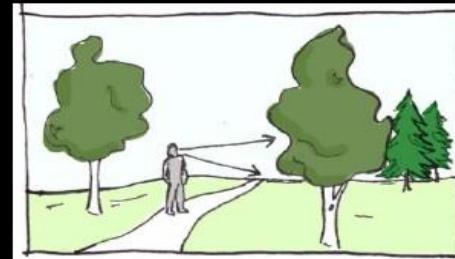
- Knowing where you are and where you're going
- Familiarity & ability to read your environment

- **Maintenance**

- Public areas that are unmaintained invite criminal behavior
- Devote resources fully to smaller areas and expand only as more resources become available

- **Territoriality**

- Places need to “belong” to somebody. Care shows ownership.



References

- International CPTED Association- <http://www.cpted.net/>
- Crime Prevention Through Environmental Design- Wikipedia
https://en.wikipedia.org/wiki/Crime_prevention_through_environmental_design
- <http://www.ncpc.org/training/training-topics/crime-prevention-through-environmental-design-cpted->
- Crime Prevention through Environmental Design – Guidebook
<http://www.popcenter.org/tools/cpted/PDFs/NCPC.pdf>

Thanks...



"It was easier
to know it than
to explain why
I know it."

-Sherlock
Holmes