Sharpening up CPTED

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International CPTED Association, Calgary, Alberta, Canada, 19 October 2015

**DaC DESIGN AGAINST CRIME RESEARCH CENTRE**

**ual: university of the arts london central saint martins**

Genesis 11, 1-9

- Now the whole world had one language and a common speech. As people moved eastward, they found a plain in Shinar and settled there.

- They said to each other, "Let us build a city, with a tower that reaches to the heavens…."

- But the LORD came down to see the city and the tower the people were building. The LORD said, "If as one people speaking the same language they have begun to do this, then nothing they plan to do will be impossible for them. Come, let us confuse their language so they will not understand each other."

- So the LORD scattered them over all the earth, and they stopped building the city. That is why it was called Babel ‾ because there the LORD confused the language of the whole world.
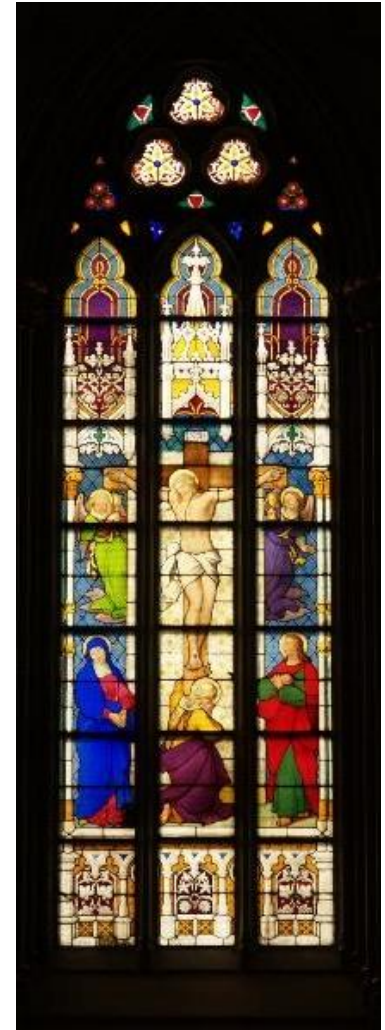
CPTEDbabel?

- The Tower of Babel story is a pretty good analogy for CPTED
  - It relates to the built environment
  - It could be seen as a crime impact statement - 'OMG! If they can build this, they're capable of anything!'
  - Being scattered all over the Earth is not such a problem with air travel and the internet… and of course being reunited every so often by conferences like this one… and we're situated on the Great Plains too
  - But finally, and most seriously, we have the issue of linguistic confusion: if we stretch this to include conceptual confusion, it's where I believe CPTED is today

- I'm a firm believer in CPTED, but I want it to be as good as it can be – so please take what follows as a constructive critique from a close friend rather than the **Wrath of the**
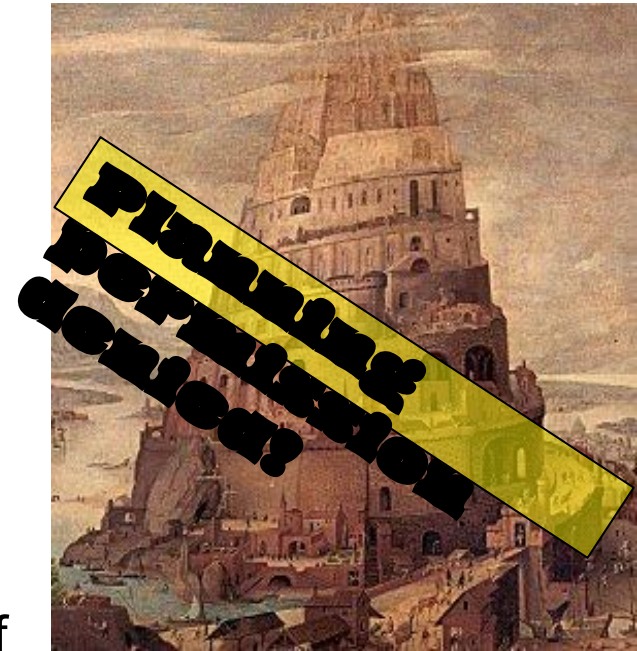
What's coming up

- Confusion within CPTED

- How the confusion happened

- Confusion

  – Between CPTED and other preventive approaches

  – Within crime prevention more generally

  – Within security

- The consequences of these confusions

- How to make things better – discourses, definitions and frameworks… experimental thoughts

Confusion within CPTED

- All the core concepts of CPTED overlap
  - Where does defensibility end, territoriality begin? Likewise defence and access control?

- All fail to distinguish between nature of **Action** and qualities of **Place**
  - Defence & Defensibility, Surveillance & Surveillability etc
  - And Territorial motivation/emotion, Territorial behaviour and plain Territory

- All fail to distinguish between **Preparation** & **Operation**
  - **Installation of Walls** enabling **Defence**
  - **Sightlines** enabling **Surveillance**

- Target-hardening has particular limitations
  - What **exactly** is the target to be protected – the house or the Ultra HD TV set inside it?
  - And what about target **softening**?
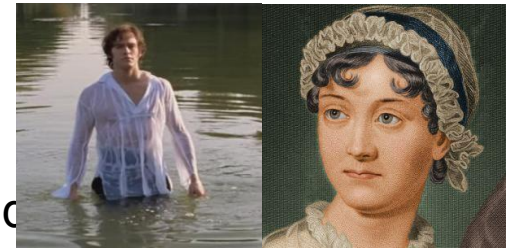
Research by Victoria Gibson & colleagues at University of Northumbria

- Analysis of 64 CPTED documents identified

  – Significant terminological conflicts

  – Free-for-all use of vernacular terms to characterise CPTED framework, with little rationale – e.g. substitution of 'Movement Control' for 'Access control'

  – CPTED organised under anything from 3 – 7 headings

  – But total of 58 terms used

  – 25 out of 64 papers offered a framework either of the author's own interpretation or unreferenced

D. Johnson, V. Gibson and M. McCabe (2014). 'Designing in Crime Prevention, Designing out Ambiguity: Practice issues with the CPTED knowledge framework available to professionals in the field and its potentially ambiguous nature.' *Crime Prevention and Community Safety* DOI: 10.1057/cpcs.2014.3

How did this confusion happen?

- CPTED has built up like a stack of pancakes, with an accretion of successive terms and concepts from different writers – Jacobs, Jeffrey, Newman, Coleman, Poyner

- This resembles succession of 'schools' of architecture and design practice – Bauhaus etc. – in extreme cases each school rubbishes its predecessors

- And now we have 'generations' of CPTED – 1x2nd, and at least 2x3rd gen – added content is good, but
  - Concern about revolution rather than accumulation
  - Divisive among practitioners/theorists

- We also have 'quick grabs' of ideas from other criminological domains – Opportunity, Broken Windows – which are then 'stuck on' to CPTED often uncritically with regard to evidence, and without much attempt to integrate the underlying theory or concepts

Confusion between CPTED and other approaches to crime prevention

- CPTED label often used synonymously with crime prevention in general
- This risks
  - Over-reaching our expertise
  - Diluting quality of knowledge in both fields

Confusion within Crime Prevention more generally

- Lack of clarity over status of **Routine Activities**, **Rational Choice** – are they theory, perspective, truism, approach? Is **Pattern Theory** a theory?

- **Opportunity** is oversimplified
  - Not just 1) something 'out there in the **environment** enabling action' but also defined by 2) offender's **resources** to exploit and cope; and 3) offender's **goals** – opportunity to do *what?*

- Sloppy usage
  - '**Likely offender**' (includes capability) shrunk to '**motivated offender**'
  - **Guardian** used for all preventer roles including place manager, handler of offender… and where are the planner, designer, architect and developer?

Confusion within Crime Prevention more generally

- Poor integration between perspectives
  - RC is psychological, RA ecological, PT spatial
  - All use slightly different terminology, or same words with different nuances
  - Put together, they have gaps and partial overlaps
  - And they shy away from **offender-related** factors – knowing about offender goals, resources and emotional precipitators can help design situational interventions

- Process model (SARA) too crude
  - **Response** covers huge diversity of action, from fitting locks to running security campaigns to building Olympic stadia – hard to capture, organise, retrieve, articulate practice knowledge

Confusion within Security

- Many meanings of

  - **Threat** (risk, hazard, intent, intent + capability)

  - **Vulnerability** (weak points, exposure, manifest risk pattern)

  - **Hazard** (harmful event, something with potential to cause harm)

  - **Risk** (likelihood, likelihood x harm; negative uncertainty or all uncertainty)

What are the consequences of the confusion?

- Our tools for thinking & communicating about CPTED principles and CPTED action are blunt & inefficient

- Operationally, this can

  – Limit the scope of the problems we can tackle

  – Allow objectives to drift – e.g. from inclusive community safety to exclusive gated security

  – Reduce the quality of interventions suggested/ designed to address particular problems

  – Constrain our ability to undertake the CPTED process as professionally and rigorously as we might

  – Disadvantage CPTED in the wider planning/ development process

  – Hinder collaboration within CPTED locally, nationally and internationally, and limit the transfer of CPTED principles to other cultures and contexts

What are the consequences of the confusion?

- In the background
  - Hinder collaboration and cross-fertilisation with wider disciplines/ professions – especially links with criminology, security and architecture
  - Hinder the capture, consolidation, retrieval & sharing of practice knowledge – efficient training and briefing is increasingly important with staff turnover/ reductions
  - Jeopardise formal research, evaluation of what works, & theory building
  - Stymie computer simulation/ agent-based modelling which can increasingly contribute to research, training, planning/design of developments, and to crime impact assessment
- Imagine medicine without a controlled vocabulary

Consequences of confusion – the example of Territoriality

The example of Territoriality

Territoriality is central to CPTED – but **poorly defined**, so we can't

- Reliably spot **weaknesses** in design relating to territoriality

- Positively design **for** territoriality – designers need clear briefs

- Monitor & adjust **mechanisms** of prevention (how designs work)

- Clarify **values** embedded in design (e.g. connection with inclusiveness)

- Undertake innovative tradeoffs with values **outside** security e.g. between territoriality and aesthetics

- Handle tradeoffs and conflicts **within** security e.g. territoriality v surveillance (walls demark private space, but may block sightlines)

- Be alert to **cultural differences** in how territoriality is interpreted

15

How to make things better?

- Time for a sharpener

How to make things better?

- Since all core principles of CPTED overlap, to understand Territoriality, for example, we have to simultaneously understand the rest of the concepts – they define each other

- So we need to **deconstruct** them and develop **definitions in depth** – to expose the 'buried connections' between the concepts and link them up

- Those definitions all need to be in a common set of **discourses** and draw on same set of **subsidiary concepts/ elements**

- This means setting out and combining:
  - **Environmental/architectural** discourse – building properties, structures, features
  - **Crime prevention** discourse – risks, causes and interventions
  - **Security** discourse – threat, hazard, mitigation
  - Action and implementation discourse – the messy people bits without which it all fails

- With each, we must start with **primitives**
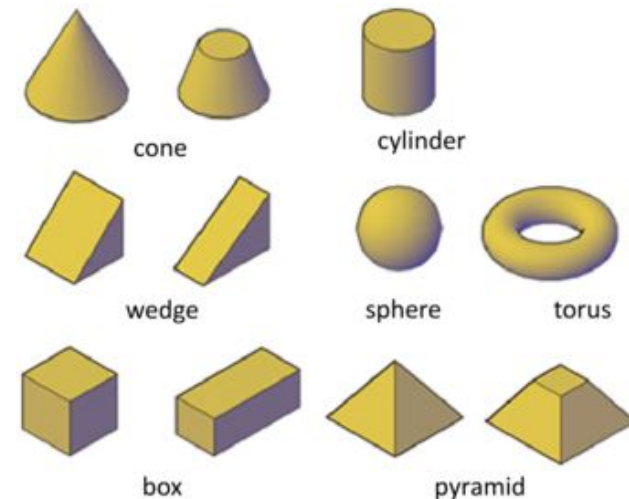
Discourses of environment & architecture – primitives

Causal properties

- Space
- Movement
- Manipulation/force
- Shelter/refuge
- Perception/ prospect
- Understandability/ information
- Motivation/ emotion
- Ownership, competition, conflict

- Each has physical, psychological and social dimensions

Structural Features

- Nodes
- Paths
- Barriers /screens
- Enclosures/ containers
- Furniture
- Signage

Content

- People (bodies)
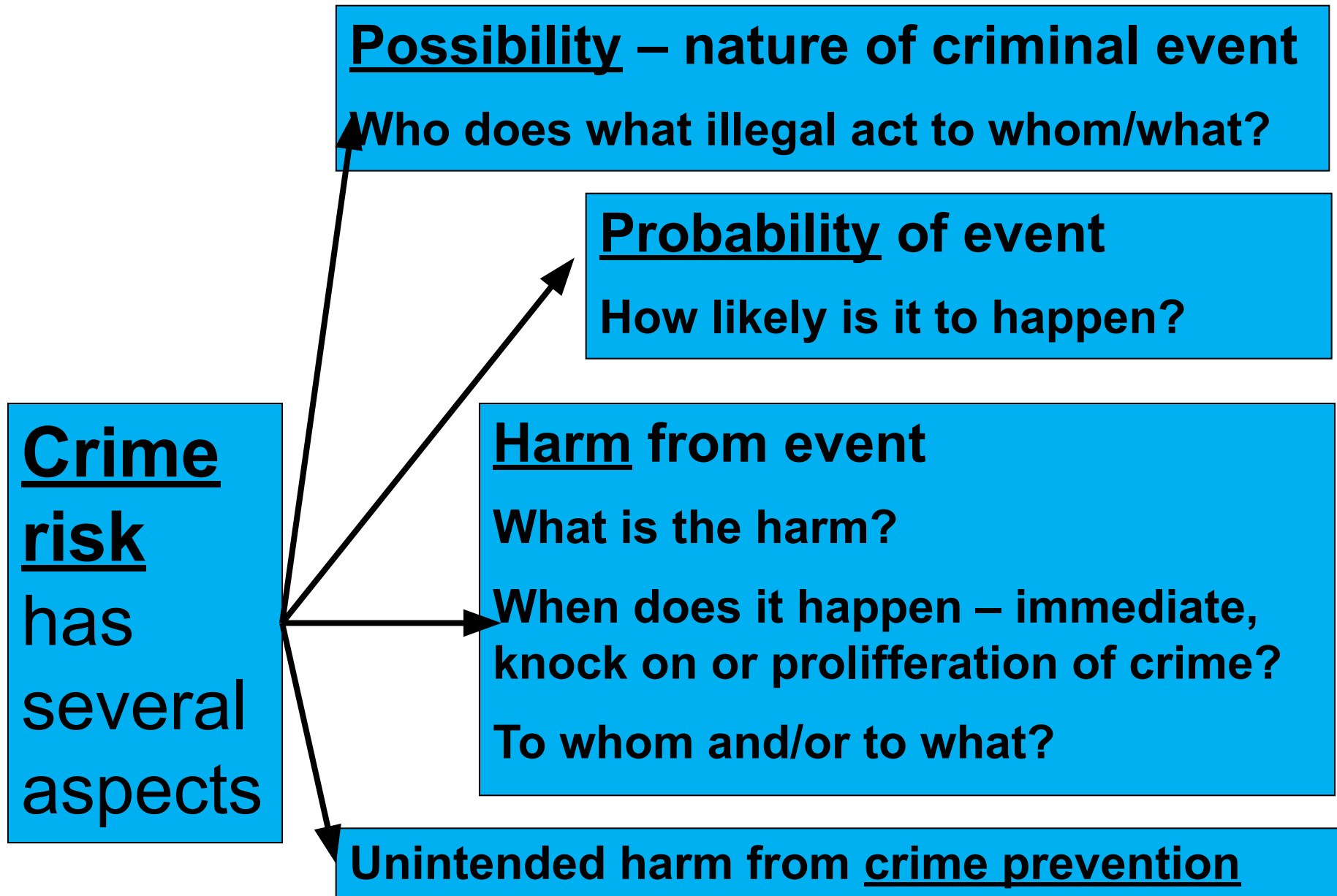- Furniture
- Mobiles (cars etc)

Expanding the detail of properties, and of features & content that confer them

- **Sight**
  - Light
  - Discrimination – camouflage etc
  - Sightlines
    - » *features* affecting this property: **Dog-legs, Sight screens, Barriers, Recesses, Enclosures, Containers**
    - » *content* affecting this property: **Crowds, Parked cars**

What is crime risk? Definition in depth

Crime risk has several aspects

Possibility – nature of criminal event

Who does what illegal act to whom/what?

Probability of event

How likely is it to happen?

Harm from event

What is the harm?

When does it happen – immediate, knock on or prolifferation of crime?

To whom and/or to what?

Unintended harm from **crime prevention**

What is crime prevention?

- Crime prevention seeks to reduce the risk of criminal events

- In particular, to

Eliminate **possibility** of crime

or if not

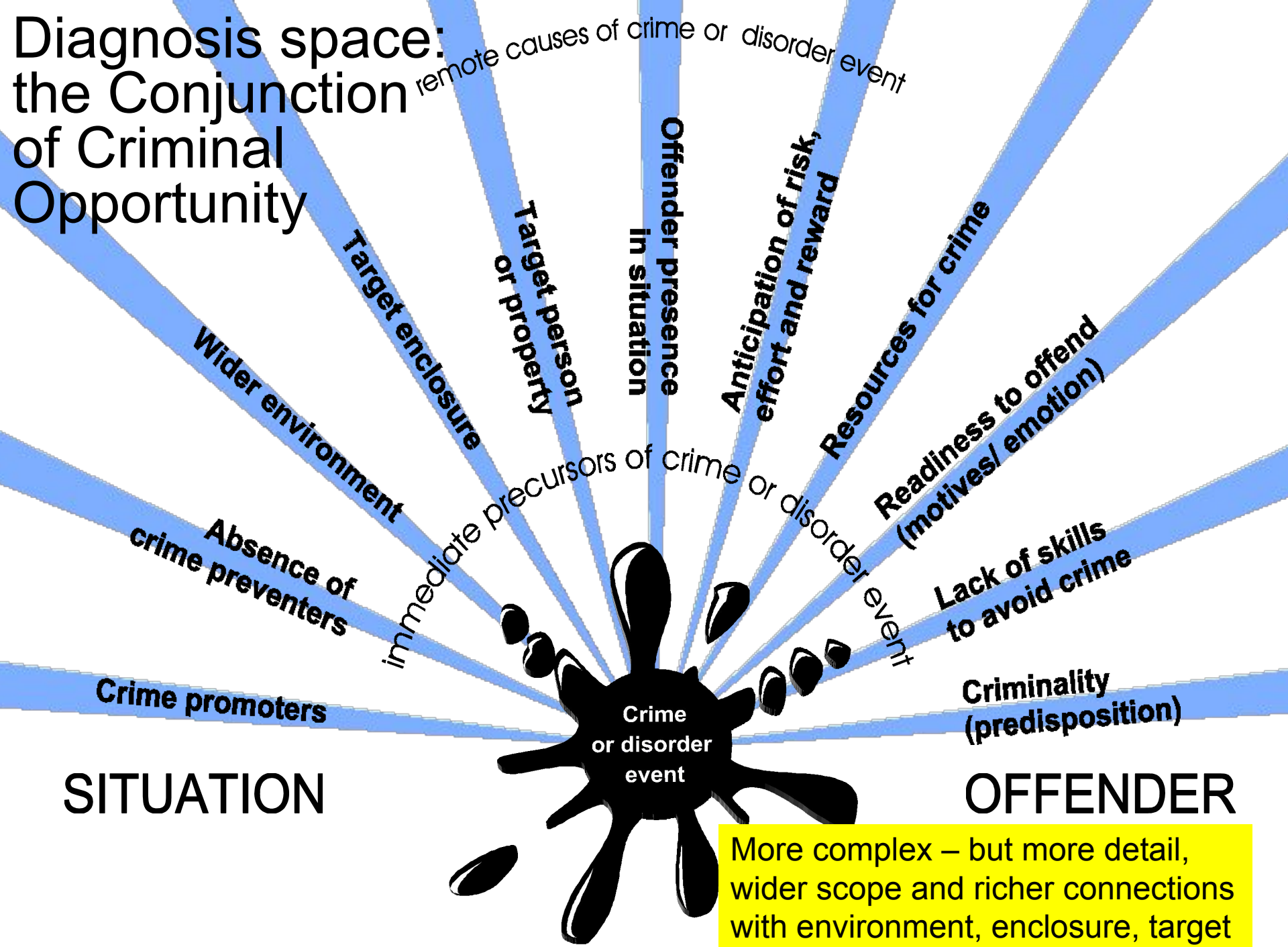Reduce **probability** of criminal events

or if not

Reduce or mitigate **harm** when events do happen – including propagation of crime

Discourse of Crime and Crime Prevention – causes and interventions

Very simple – but very limiting – can't handle the detail

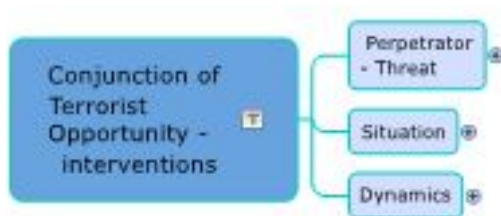# Diagnosis space: the Conjunction of Criminal Opportunity

remote causes of crime or disorder event

immediate precursors of crime or disorder event

Crime or disorder event

SITUATION

- Wider environment
- Target enclosure
- Target person or property
- Offender presence in situation
- Absence of crime preventers
- Crime promoters

OFFENDER

- Anticipation of risk, effort and reward
- Resources for crime
- Readiness to offend (motives/ emotion)
- Lack of skills to avoid crime
- Criminality (predisposition)

More complex – but more detail, wider scope and richer connections with environment, enclosure, target

remote causes of crime or disorder event

interventions in causes

Surveillance, access control, social control, self-protection

Environmental design, conflict reduction, risk-setting

Perimeter/access security

Target hardening, removal, value reduction

Excluding/deflecting offenders from crime situation

Deterrence and discouragement

Restricting resources for crime

Discouraging/deterring careless or deliberate providers

Changing outlook into circumstances including conflict resolution

Cognitive social skills enhancement

Early/remedial intervention

SITUATION

OFFENDER

Intervention space:
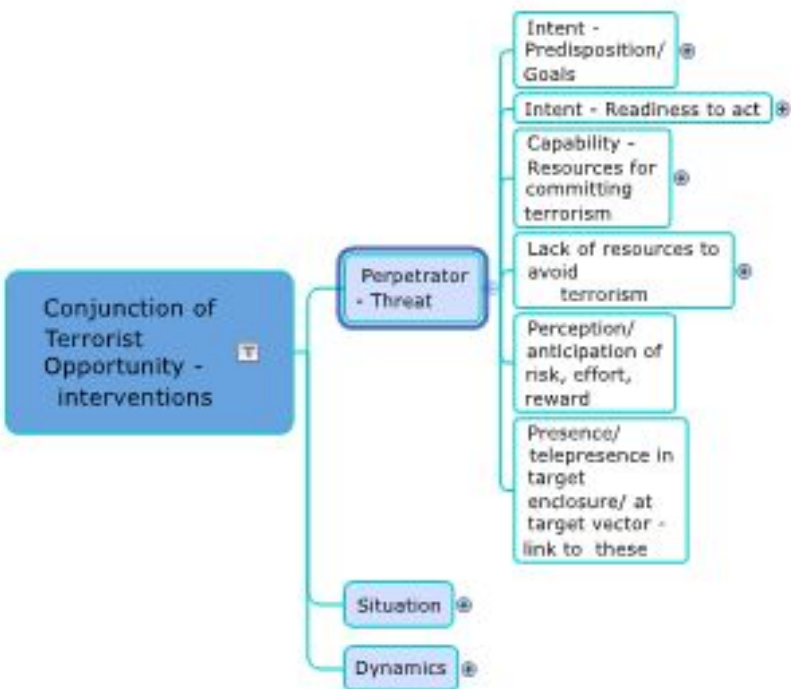**crime prevention and**
the Conjunction of Criminal Opportunity

Combining environmental properties and crime preventive interventions – Counterterrorism project

Project on what works tackling terrorism at complex stations

Start with map of causes of terrorism events, and the perpetrator perspective, and drop the interventions onto them later
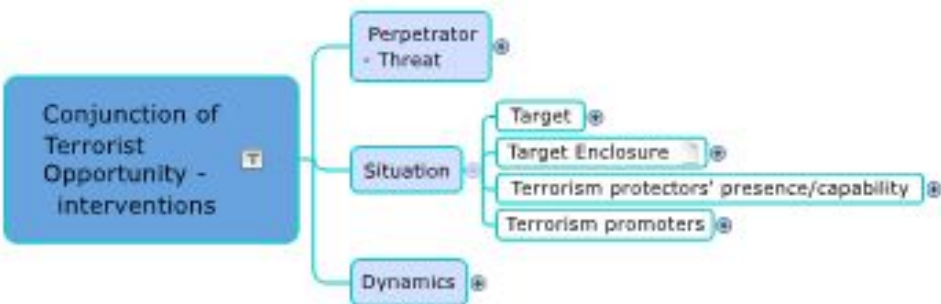
Conjunction of Terrorist Opportunity - interventions
- Perpetrator - Threat
- Situation
- Dynamics

www.hud.ac.uk/research/researchcentres/acc/projects/reducing-serious-crime-and-terrorism-at-mmpts/

24

Combining environmental properties and crime preventive interventions

Conjunction of Terrorist Opportunity - interventions

- Perpetrator - Threat
  - Intent - Predisposition/ Goals
  - Intent - Readiness to act
  - Capability - Resources for committing terrorism
  - Lack of resources to avoid terrorism
  - Perception/ anticipation of risk, effort, reward
  - Presence/ telepresence in target enclosure/ at target vector - link to these
- Situation
- Dynamics

Start by 'thinking perpetrator' – intent, capability, perception, presence

Combining environmental properties and crime preventive interventions

Conjunction of Terrorist Opportunity - interventions
- Perpetrator - Threat
- Situation
  - Target
  - Target Enclosure
  - Terrorism protectors' presence/capability
  - Terrorism promoters
- Dynamics

Then 'think situation' – target, target enclosure, preventers and promoters

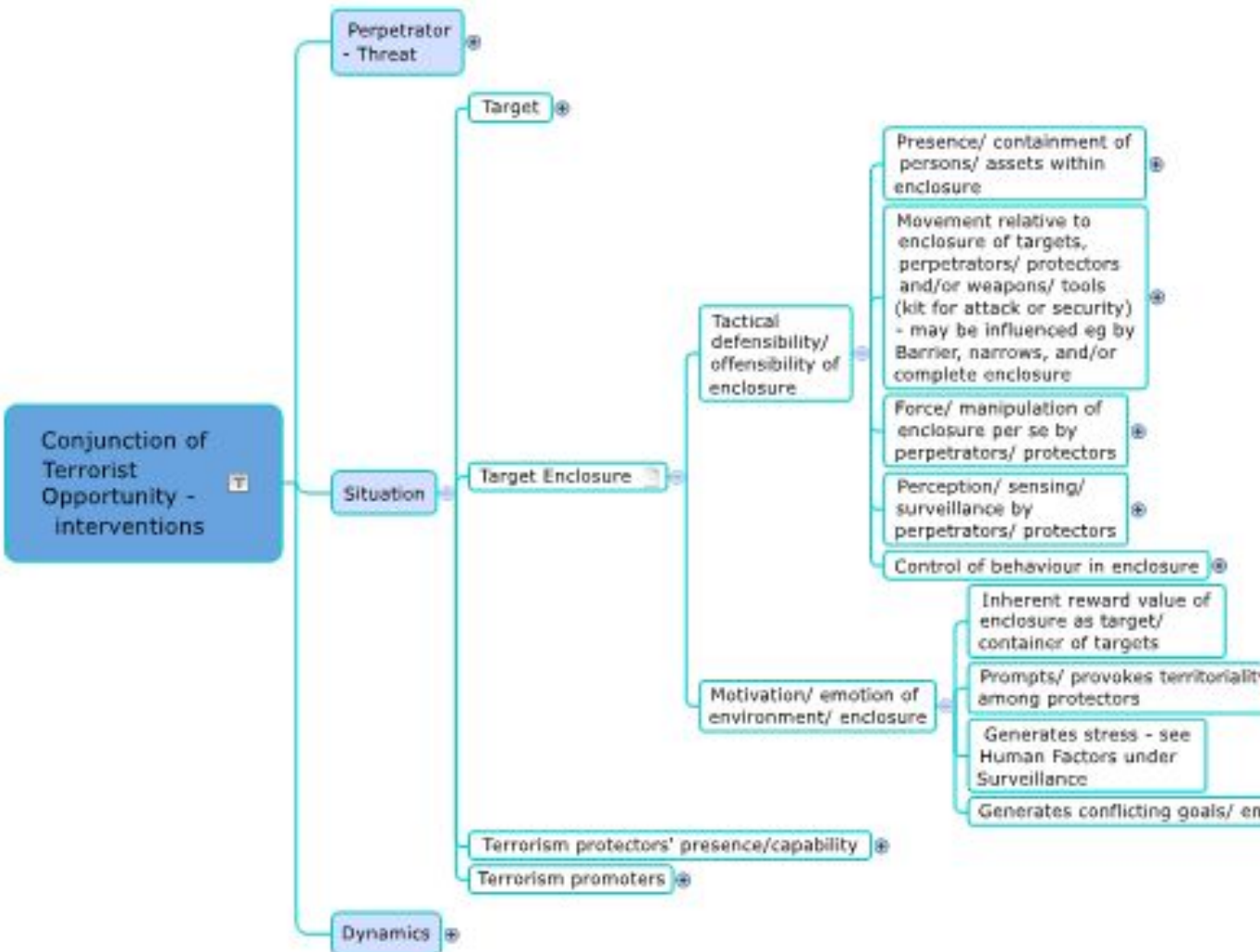# Combining environmental properties and crime preventive interventions
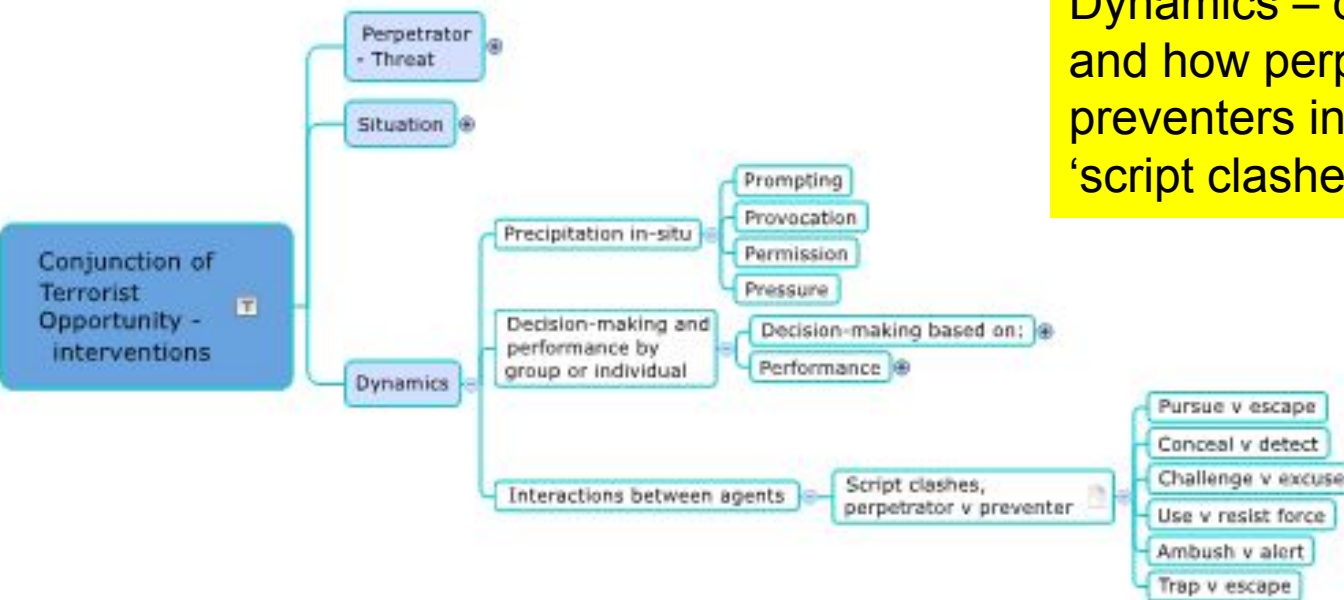
Dynamics – decision-making, and how perpetrators and preventers interact through 'script clashes'

Conjunction of Terrorist Opportunity – interventions

- Perpetrator - Threat
- Situation
- Dynamics
  - Precipitation in-situ
    - Prompting
    - Provocation
    - Permission
    - Pressure
  - Decision-making and performance by group or individual
    - Decision-making based on:
    - Performance
  - Interactions between agents
    - Script clashes, perpetrator v preventer
      - Pursue v escape
      - Conceal v detect
      - Challenge v excuse
      - Use v resist force
      - Ambush v alert
      - Trap v escape

Combining environmental properties and crime preventive interventions
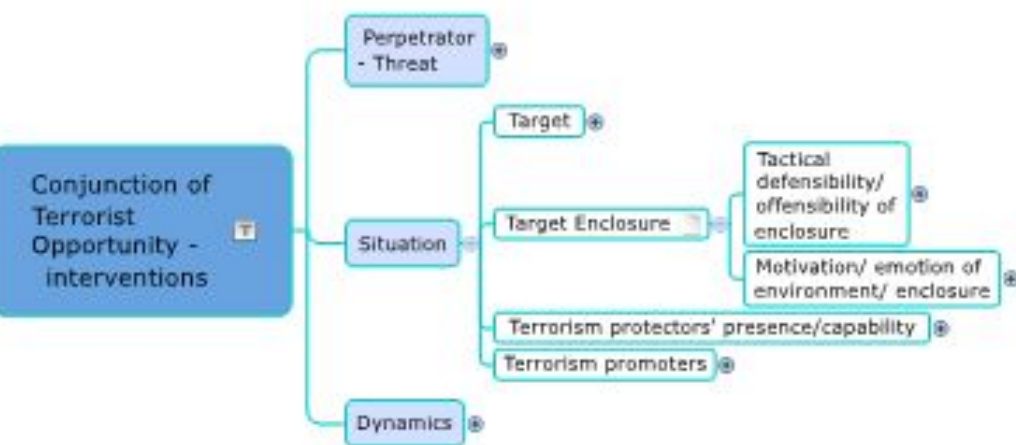
Detail of situation – target, target enclosure… its defensibility and offensibility, and motivational/ emotional properties

Combining environmental properties and crime preventive interventions

Conjunction of Terrorist Opportunity - interventions
- Perpetrator - Threat
- Situation
  - Target
  - Target Enclosure
    - Tactical defensibility/ offensibility of enclosure
      - Presence/ containment of persons/ assets within enclosure
      - Movement relative to enclosure of targets, perpetrators/ protectors and/or weapons/ tools (kit for attack or security) - may be influenced eg by Barrier, narrows, and/or complete enclosure
      - Force/ manipulation of enclosure per se by perpetrators/ protectors
      - Perception/ sensing/ surveillance by perpetrators/ protectors
      - Control of behaviour in enclosure
    - Motivation/ emotion of environment/ enclosure
      - Inherent reward value of enclosure as target/ container of targets
      - Prompts/ provokes territoriality among protectors
      - Generates stress - see Human Factors under Surveillance
      - Generates conflicting goals/ em
  - Terrorism protectors' presence/capability
  - Terrorism promoters
- Dynamics

Situation in still greater depth – **Defensibility**…
Containment,
Movement,
Force/ manipulation,
Sensing,
Control;

Motivation/ emotion…
Reward value to perpetrator,
Prompting/provoking territoriality;
Generating stress and conflict

29

Combining environmental properties and crime preventive interventions
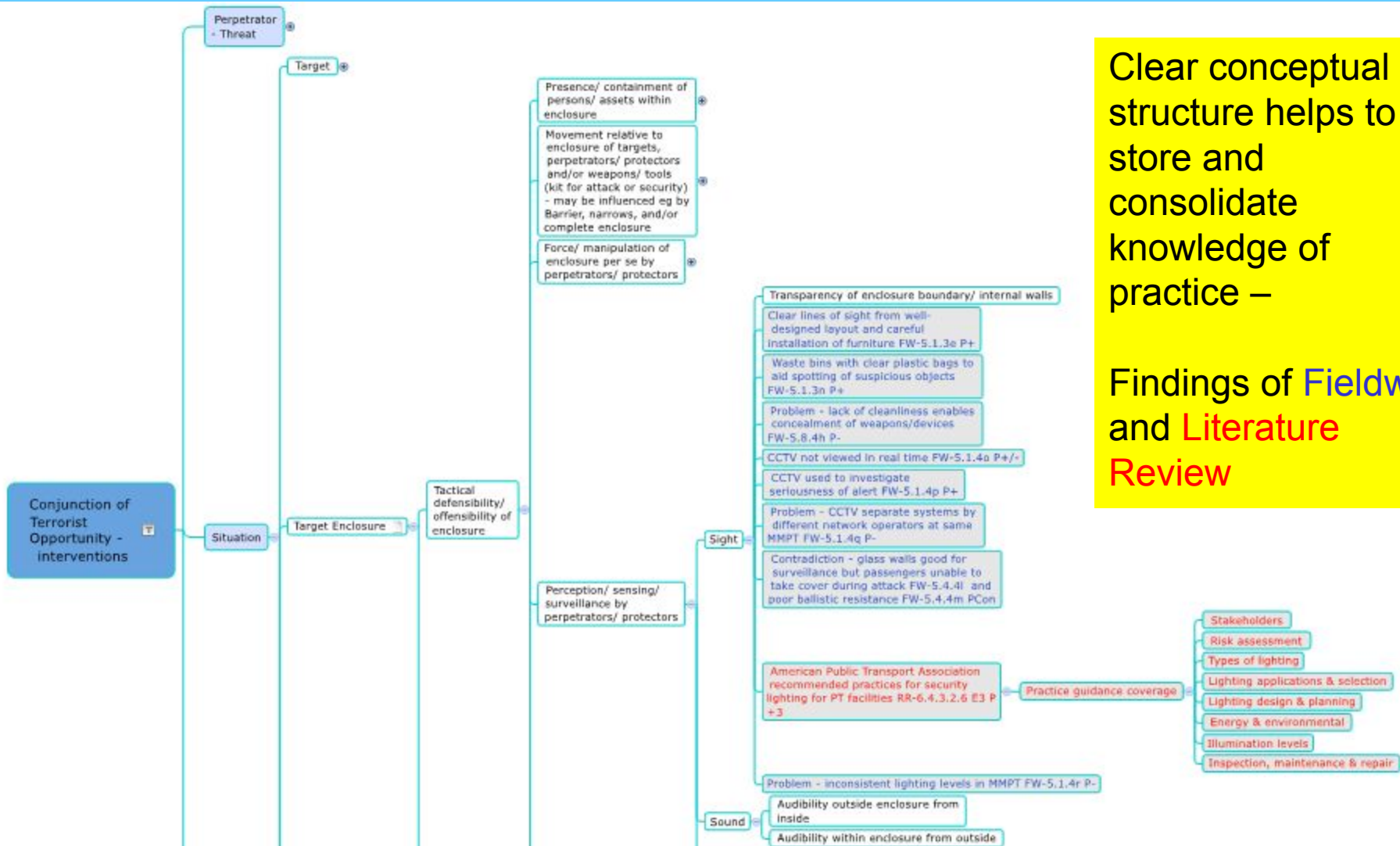
Clear conceptual structure helps to store and consolidate knowledge of practice –

Findings of Fieldwork and Literature Review

Combining environmental properties and crime preventive interventions

Storing knowledge of practice – **the whole caboodle** – 400-odd items of research, guidance, fieldwork
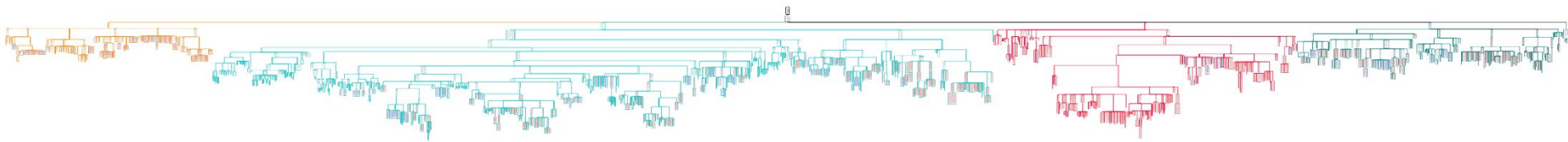
Discourse of Design – Process models

- Ted Kitchen – CPTED lacks a decent process model

- Design has a generic model – the **Double Diamond**

- Not so far removed from Designate, Define, Design

problem definition

Discover
Behaviour-led design research

Define
Creative work shops and idea generation

Develop
Review ideas through culture thinking and design

Deliver
Prototyping, selection and mentoring
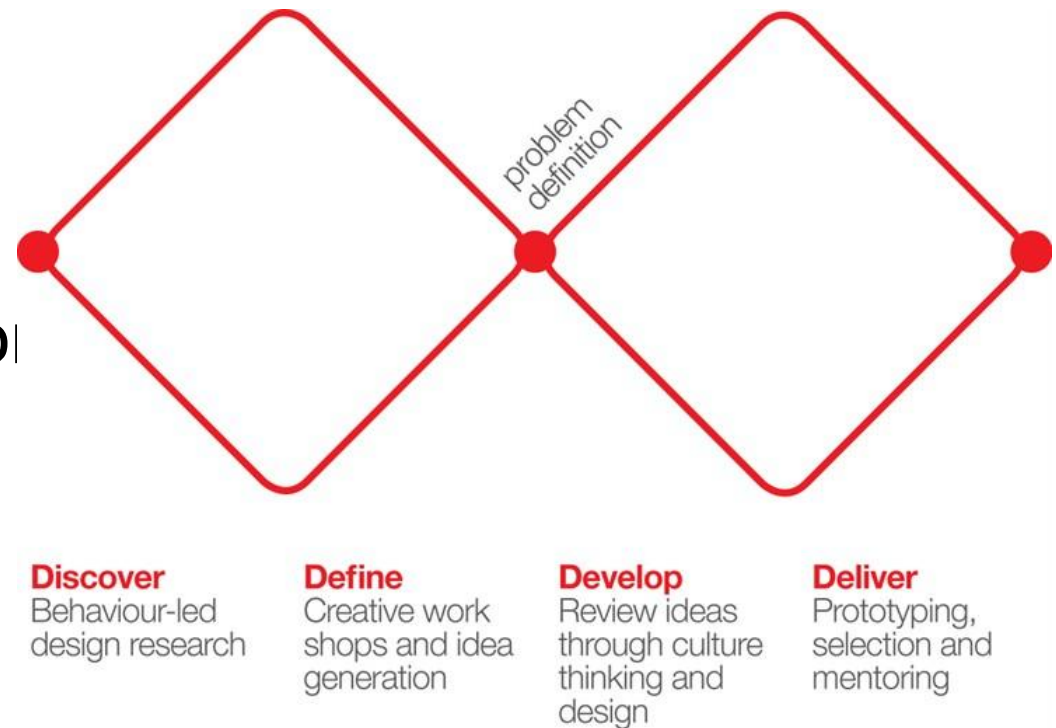
Discourse of Crime and Crime Prevention – Process models

5Is framework for crime preventive action

- Crime prevention has SARA ….

- But also 5Is which can arguably catch more of the detail and complexity of preventive action

    – The better to connect with CPTED

http://5isframework.wordpress.com

5Is framework for crime preventive action
- Scanning & Analysis
- Response
- Assessment

Starting with familiar equivalent – SARA

SARA's Response task expanded

Scanning & Analysis

Intervention principles and methods fit here

5Is framework for crime preventive action

Response

Intervention

Address causes of actions or events: weaken, block, remove Opportunity, reduce Motivation, influence Decisions and spoil performance

CPTED principles

Specific preventive methods

Problem Analysis Triangle

Conjunction of Criminal Opportunity - intervention principles

The D principles

Prepare for mitigation of Harm to people, assets, system operation - to reduce effect of criminal action

Implementation - tasks

Involvement - people and organisations

Assessment

38

Involvement… Plenty of space for **2nd Generation 'C' processes** without confusing them with Intervention

Task (to be done) is to adapt 5Is to articulate all the specific processes of CPTED so there is a common family of process models

Example definition – Surveillance

- **Surveillance** is an **activity** for which someone or some institution, acting in a **crime preventer role**, has taken responsibility

- **Surveillability** is an instrumental **property** of the **environment** conferred by **features** e.g. sightlines and lighting, that facilitate surveillance; and **content** e.g. obscured by parked cars

- Surveillance may be undertaken in support of **Territoriality** and may exploit advantages of **Defensible Space** (prospect)

- Other definitions at end of this presentation and see also http://reconstructcpted.wordpress.com

40

Surveillance – concept map

CPTED — Surveillance

Surveillance – concept map

CPTED — Surveillance — Property of environment - Surveillability / Preventer roles
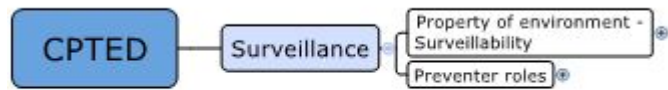
# Surveillance – concept map
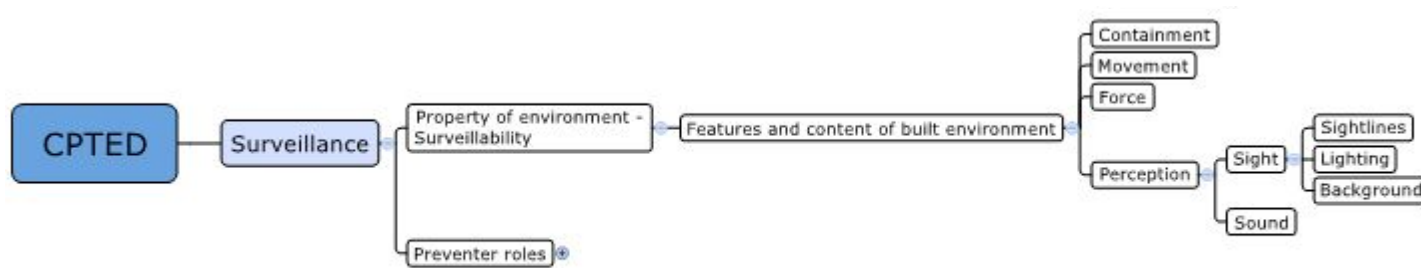
Surveillance – concept map
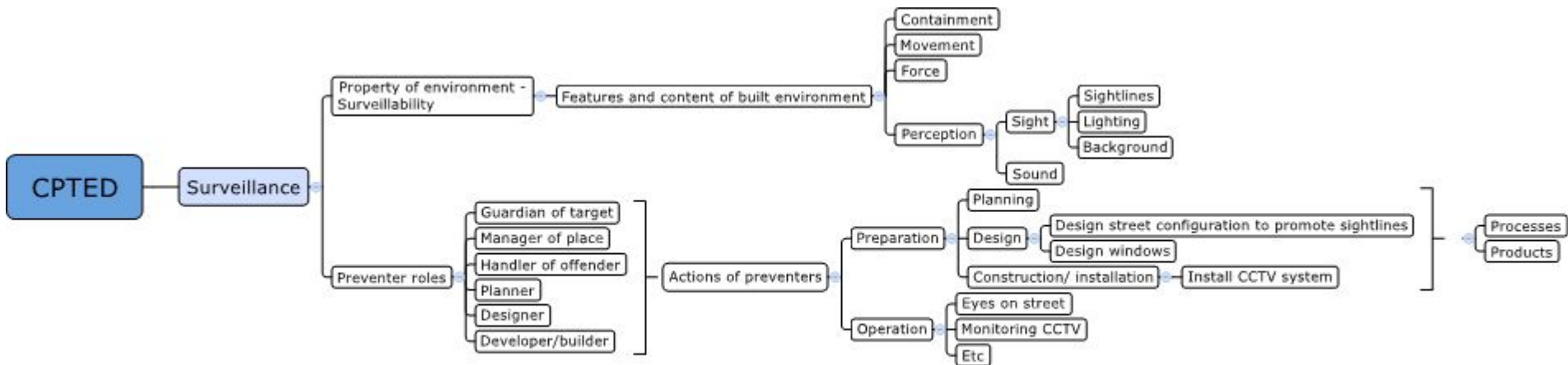
All this could well be disrupted and modified by new research e.g. interviews with offenders – but it's designed to be a flexible, adaptive 'learning engine'

Overall message

- CPTED needs a controlled vocabulary and sharpened concepts…

- *But* we designers against crime must combine discipline & rigour *with* exploration & creativity

- And this must cover material, informational and social dimensions

- The people stuff in particular is what makes or breaks CPTED
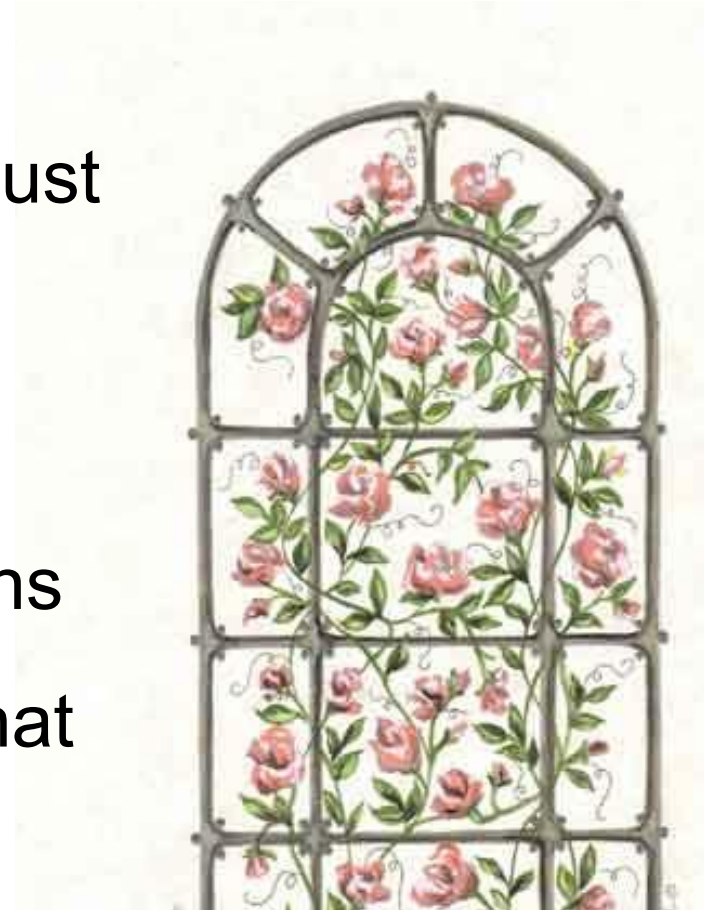
The End is nigh
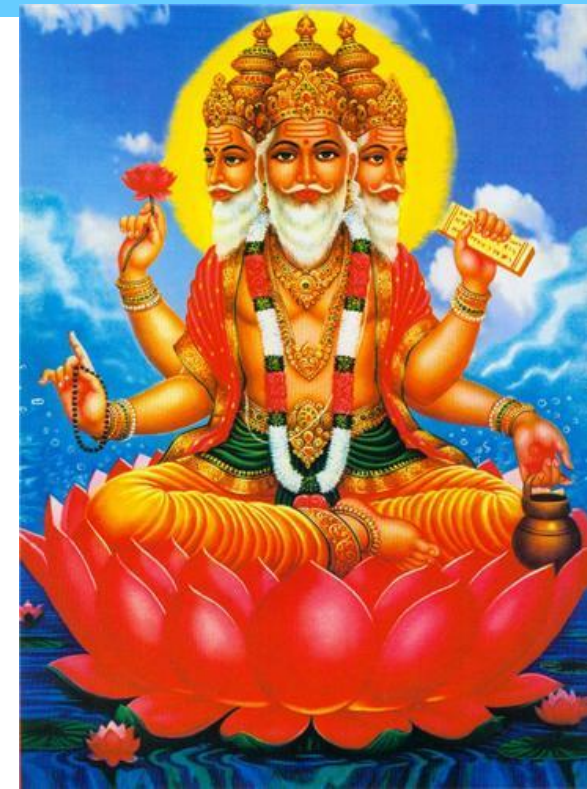
- Hopefully I've combined the destroyer role of Shiva with the creator role of Brahma, whilst – like Vishnu - preserving what's good about the research and the huge body of experience on CPTED

reconstructcpted.wordpress.com

5isframework.wordpress.com

designagainstcrime.com/methodology-resources/crime-frameworks/

p.ekblom@csm.arts.ac.uk

Extras

A Definition of CPTED

- **CP**   Reducing probability of crime and related problems, and their consequent harm, and enhancing the quality of life through community safety

- **ED**   By using processes of planning and design of 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', and contextually appropriate in all other respects

- Whilst achieving a balance between

  - the efficiency of avoiding crime problems *before* construction

  - and the *adaptability* of tackling them through subsequent management and maintenance

Territoriality

- Territoriality is both a **value** in itself (an Englishman's home is his castle) and an **instrumental means** to crime prevention ends
- As used in CPTED practice and literature, it is unclear whether it is a **human attribute**, or a socially-ascribed and physical **property** of **space**
- Best to consider it as both (**territoriality** and **territory**), subsumed under an **ecological** framework which includes human **agents** in relation to their **environment**

- A complex **propensity** of perceptual, emotional and motivational tendencies, goals and resources leading to responses 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

- Territoriality is a common human propensity but may be **realised** and **communicated** differently by different individuals and/or (sub)cultures

Territoriality – human side (2)

- Territory is held **relative to other possible owners**, so
  - There have to be relations of either **acceptance/legitimacy or conflict** between private parties, or with the involvement of the community and/or state
  - and **cultural understandings** of concepts of ownership, norms (and laws) of legitimate acquisition, use, defence etc
- Territoriality in particular requires people's **roles** to be understood
- **Sharing** of territory will pose particular issues

Territory – spatial side (1)

- Has to be **extended** in space and **durable** over some time period (brief or lasting)

- May extend into virtual or cyber space

- Will normally have properties relating to **utility to users**
  - Either for **itself** (a private garden to enjoy)
  - Or as an **enclosure** to secure their person and belongings

- Has to have the **properties** of **identifiability** (whose is it?) and **demarkability** (where is it/what are its boundaries?)

Territory – spatial side (2)

- May also have properties of **access control** and **wider defensibility**, both of which may be facilitated by **surveillability** and **hardening of enclosure**

- Will have an **image** to the owner and/or to other parties

- Will usually require **maintenance**, which influences image

- All these 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**

Defensible Space

- An instrumental **property** of the **environment**

- Conferred by **features** eg barriers and markers, plus the property of surveillability

- Linked to **capacity of people** to defend it through human resources (eg numbers, assertiveness, knowledge of how to challenge and respond) and technical resources eg alarms

- **Defending** the space is an **activity** closely linked to **Territoriality**

Target hardening

- A preventive **activity** whose purpose is to give material or informational **targets of crime** the **property** of **resistance to physical attack** in the service of some offender's attempt to **misappropriate** (steal), **mistreat** (damage), **mishandle** (counterfeit, smuggle), **misuse** (as tool or weapon) or **misbehave** with (in antisocial behaviour)

- Note that hardening the **target** is often confused with hardening the **target enclosure** such as a building or compound which offenders wish to enter – this last is achieved eg by creating, strengthening or heightening barriers

- Hardened **enclosures** may contribute to **Defensible Space**

- **Target hardening** of built environment against mistreatment, misuse or misbehaviour may aid (or spoil) **Image and Maintenance**

Access control

- An **activity** intended to
  - Discriminate between individuals seeking to enter the interior **space** of an **enclosure** (in terms of who, when, what carrying/wearing and how they are behaving)
  - To prevent their committing crime by their presence (eg minors in a bar), or their actions once within the enclosure
- May be motivated and facilitated through **Territoriality** acting on owners/managers and visitors
- May be facilitated by **Defensible Space**

Activity support

- A **property** of the **environment** which variously
  - **Alerts, informs, motivates, empowers and directs** people to enter it and remain there
  - Where they act as **users** playing legitimate roles/ undertaking legitimate activities, and thus as potential **crime preventers**
  - And/or which channels them away from **conflict** over space, noise, incompatible behaviour etc
- Legitimate users may supply preventive support by
  - **Occupying space** that would otherwise have been taken by (potential) offenders
  - Their mere **presence** may **deter and discourage** offending
  - Or they may undertake **surveillance** and make appropriate preventive responses including **informal social control**
- **Territoriality** may empower owners/managers to *influence* activity support, & visitors to *accept* influence

Image & Maintenance

- **Image** is an **individually/collectively** held **perception** with **emotional** content

- It relates variously to
  - **Crime risk**
  - Wider **community safety/quality of life**
  - **Reputation** of residents/users etc
  - Influencing people's **decisions and actions** (eg to visit, work, live there)

- **Image and maintenance** together may influence **objective crime risk** by **prompting, provoking or permitting** offending through broken windows-type processes

Image & Maintenance

- **Maintenance** is **activity** (or the **state** of an **environment** reflecting that activity or its absence), which influences **image**
  - Both in terms of the litter, graffiti etc which may be present
  - And by the perception of the very fact that someone is/is not doing the maintenance

- Maintenance relates to **Territoriality** in terms of
  - Individuals, families or institutions being motivated and permitted to take responsibility for undertaking maintenance of a given **space**
  - and **defensibility** and **access control** to enable them to do the maintenance without interference, or risk of it being messed up