CPTED, But Not As We Know It: Investigating the Impact of Conflicting Frameworks and Terminology in Crime Prevention through Environmental Design

"...the working knowledge of crime prevention that exists is couched in a triangle of inconsistent and loosely defined terms and concepts which render it difficult for designers to access, to think about and to apply" Professor Paul Ekblom of the Design Against Crime Research Centre, London.





Objectives

- CPTED: A critique
- CPTED conflict in academic research
- 'Territoriality'
- Preparation and Operation
- Framework Reconfiguration
- Crime prevention policy conflict
- CPTED use in practice
- Links (or lack of) to academic research
- Concluding points





• The most commonly cited definition (Gibson & Johnson 2013) was given by Timothy Crowe (2000) of the U.S National Institute for Crime Prevention.



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 More recently the concept has been redefined by Ekblom (2013) of the Design Against Crime Research Centre:

"CPTED is reducing the possibility, probability and harm from criminal and related events, and enhancing the quality of life through community safety, by the process of planning and design of the environment... on a range of scales and places, to produce designs fit for purpose and contextually appropriate, whilst achieving a balance between the efficacy of avoiding crime problems before construction, and the adaptability of tackling them through subsequent management and maintenance" (2013:13)

Context

- Complex historical development
- Necessary part of the overarching process of urban design
- Demonstrable paucity of studies attempting the development of a holistic
 CPTED framework
- Many criticisms of CPTED but very little systematic analysis or justification
- Detailed framework s behind the concept of CPTED
- The use of CPTED in the professional arena
- Statutory requirement in England and Wales



Aim: To identify a definitive list of CPTED criticisms, extracted from a wide scope of CPTED related literature and rank them in terms of the level of justification.

- Systematic analysis of all critical CPTED literature
 - Directed Content Analysis
 - Actor Network Theory
 - Graph Visualisation and Manipulation



Directed Content Analysis

- Structured process
- Existing theory identifies key concepts and variables as preliminary coding categories
- Identification and categorisation of all CPTED criticism occurrences
- Predetermined codes





Directed Content Analysis Literary Search



Directed Content Analysis Literary Search

- Initial literature scoping exercise
 - No studies carried out directed content analysis to evaluate the justification and ranking of CPTED criticisms
- Literary search included:
 - Electronic databases
 - Core bibliographic databases
 - Internet searches
 - Research registers
 - Journal websites
 - Author homepages and social networking profiles



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Inclusion/Exclusion Criteria

<u>Parameters</u>	Inclusion Criteria	Exclusion Criteria	
Location	Worldwide	-	
Language	Studies written in English	Studies not written in English	
Time Frame	Studies published from 1970 (inclusive) onwards	Studies published before 1970	
Study Type	Qualitative and Quantitative Critical theme	Non critical acceptances	
Source	Textbooks Journal Articles Peer reviewed articles	Second Generation CPTED studies	



Search Results

- Representative subset of all CPTED literature
 - 188 documents in total published between 1972- present which aligned with the inclusion criteria
 - UK and International documents
 - A variety of:
 - Journal Articles
 - Conference papers
 - Magazine Articles
 - Government Reports



Actor Network Theory



Actor Network Theory

An approach to social research and theory which assumes that the objects being analysed are part of a social network

 Actor Network Theory integrated into the Directed Content Analysis to form a systematic categorisation and analytical process



Actor Network Theory

- Actor Network Theory integrated into the Directed Content Analysis to form a systematic categorisation and analytical process
- Analysis of the complex relationships and drivers behind CPTED literature



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- Used to form a structure to the category development



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10 Categories were formed

- Criticism
- Authors
- Methodology
- Discipline
- Data
- Scale
- Type
- Place of Study
- Place of Author
- Citations



Criticism Frequencies

<u>Criticism</u>	Count	Criticism Category	Count
Poor Communication and Collaboration between stakeholders	36		
Assumes one size fits all	10	Work Effort	49
Top Down Approach	3		
Personal Capable Guardianship is dependent on wider conditions	21	Need for further research	
Poor Evaluation and Measurement	8		37
Ignorant of Social Aspects	8		
CPTED creates a Fortress Society	14	Negative Effects	
Offensible Space	7		33
Increasing public use increases crime	6		
CPTED is not sustainable	3		
Displacement	3		
Weak empirical evidence	7	Methodological	15
Narrow range of tested scales	6	- Weaknesses	
Conflicting principles	2		



Graph Visualisation and Network Theory

- Visualise actor network
- Spatialise, filter and manipulate actor network
- Networks are made up of nodes with a set of edges which link them together based on intricate relationships.



Analysis based on:



Analysis based on:

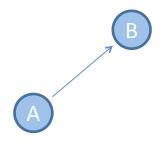
- Strength of Weak Ties Theory (Granovetter 1973)

В





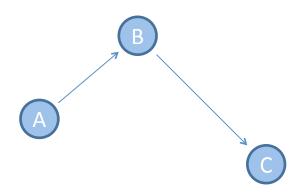
Analysis based on:



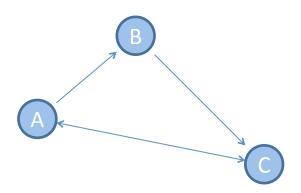




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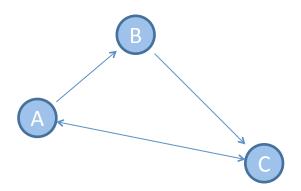


Analysis based on:



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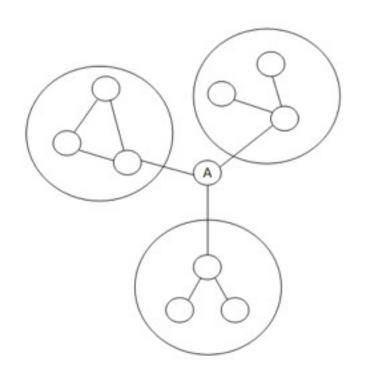
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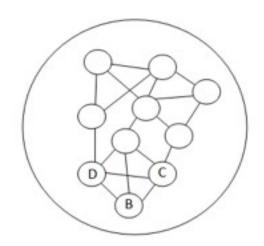


• Weak ties may receive better knowledge transfer than strong ties



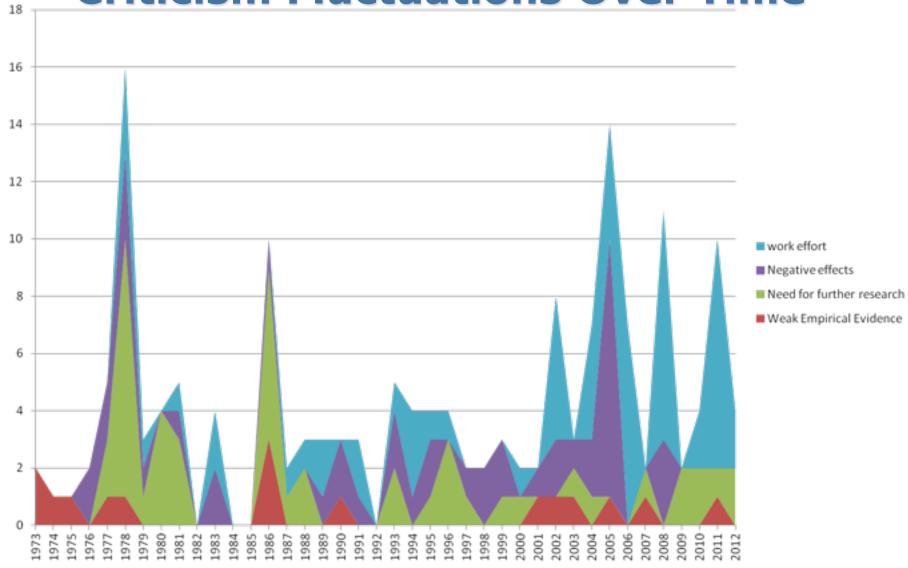
Structural Holes Theory of Social Capital (Burt 1992)



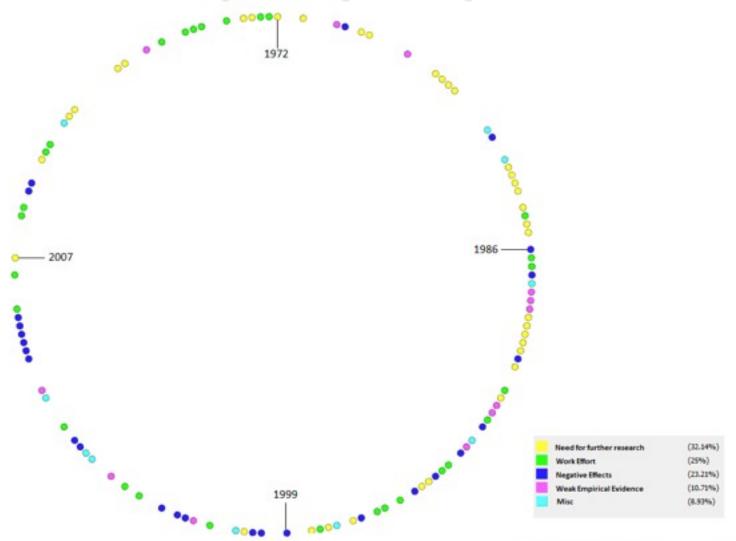




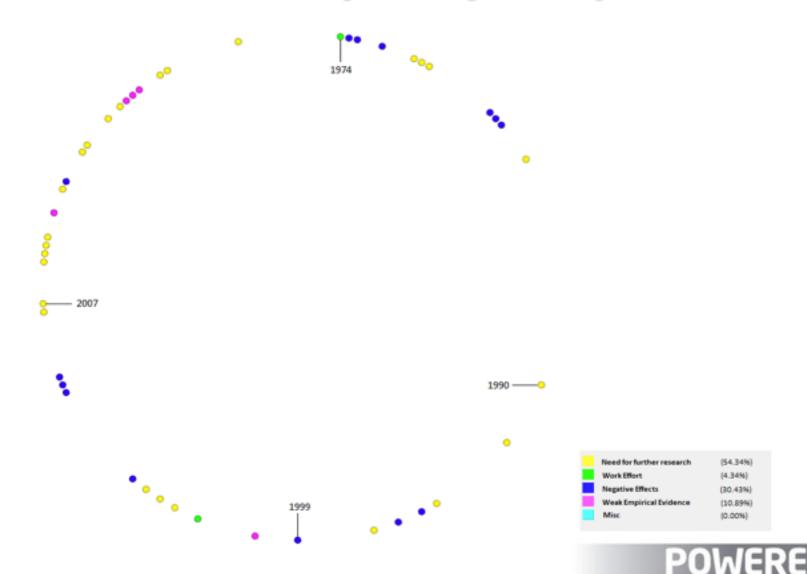
Criticism Fluctuations Over Time



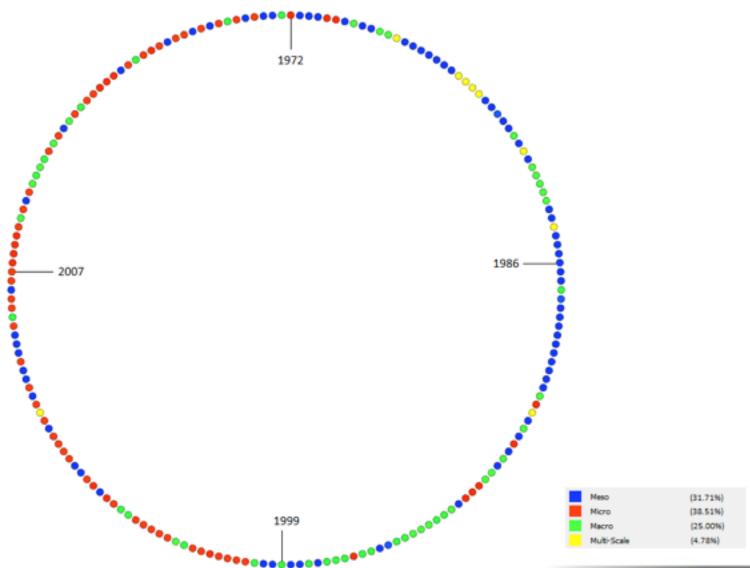
Temporal Shift in Social Science Disciplinary Perspective



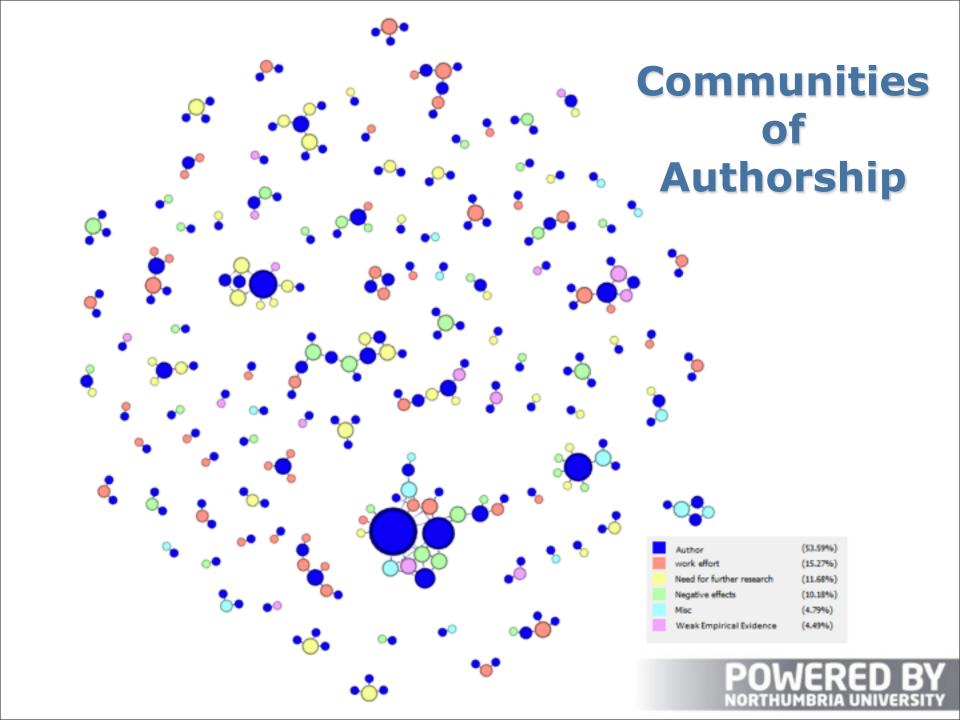
Temporal Shift in Professions and Applied Science Disciplinary Perspectives

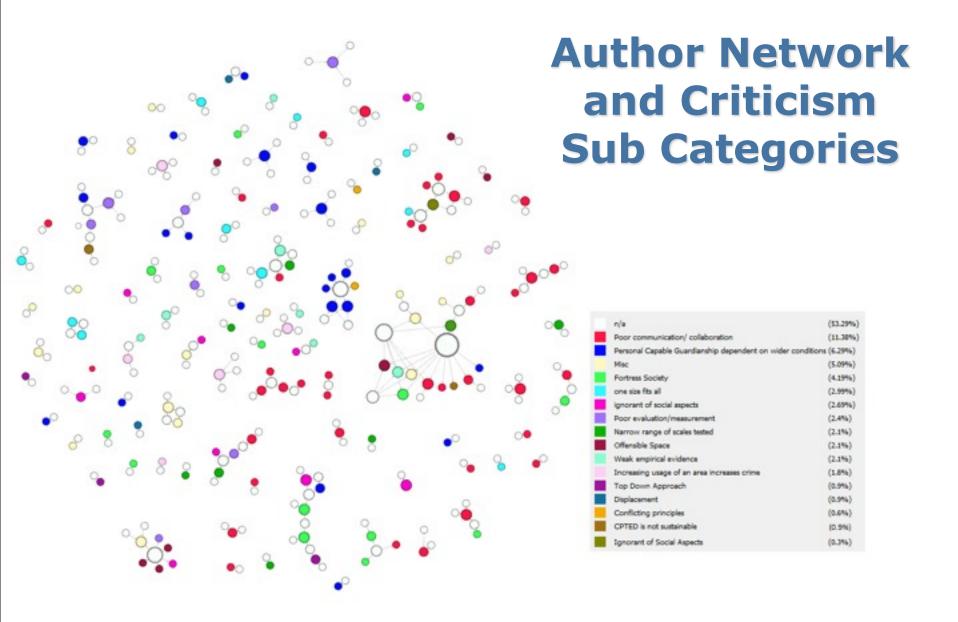


Temporal Shift in Study Scale



POWERED BY NORTHUMBRIA UNIVERSITY







International Collaboration, Filtered by Criticism Categories

- CPTED research predominantly clusters in the US
- Significant geographical distribution of work effort criticisms
- Negative Effects dominant within the network, but little recognition in Australia



International Collaboration, Filtered by Criticism Sub-Categories

- Poor Communication/Collaboration most geographically distributed
- Personal Capable Guardianship dependent on wider variables is limited to collaboration between the UK and USA

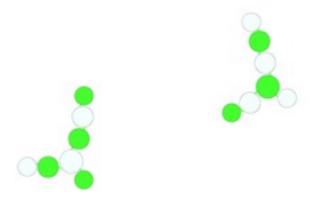
Discipline Sub Category

	Paper	(50%)
	Criminology	(8.38%)
	Psychology	(8.08%)
	Sociology	(5.69%)
	Planning	(4.19%)
	Architecture	(4.19%)
	Crime Prevention	(2.99%)
	Political Science	(2.1%)
	Geography	(2.1%)
	Law	(1.8%)
	Criminal Justice	(1.2%)
	Housing and Urban Development	(0.9%)
	Computing	(1.0%)
	Medcine	(0.6%)
	Waste and Resource Management	(0.6%)
	Urban and Regional Studies	(0.6%)
	Health	(0.6%)
	Public Affairs	(0.6%)
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	Government and Justice	(0.3%)
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	Community and Regional Planning	(0.3%)
	Human Development and Social	(0.3%)
	Environmental Resource Manage	(0.3%)
	Human Factors Management	(0.3%)
_	-	

Criticism

	Author	(53.59%)
	work effort	(15.27%)
	Need for further research	(11.68%)
	Negative effects	(10.18%)
П	Misc	(4.79%)
	Weak Empirical Evidence	(4.49%)



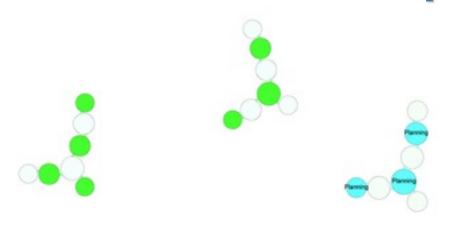


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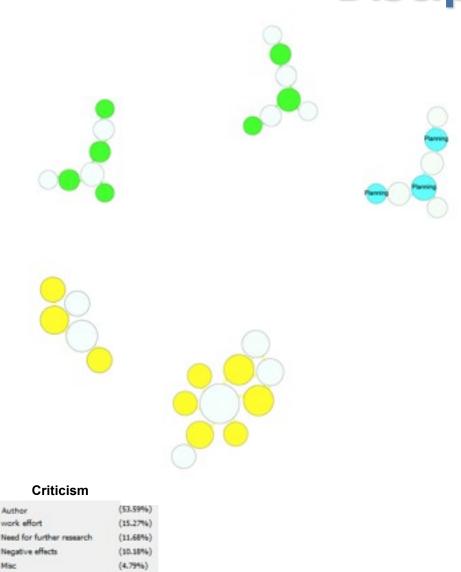
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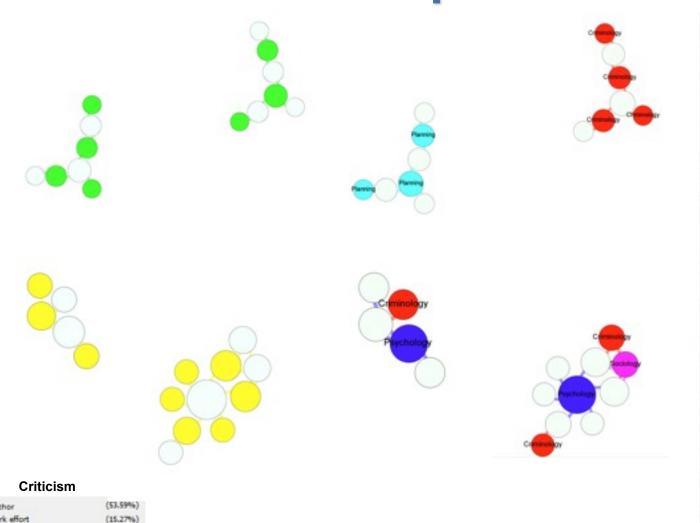
Weak Empirical Evidence

(4.4996)

Discipline Sub Category







Need for further research

Weak Empirical Evidence

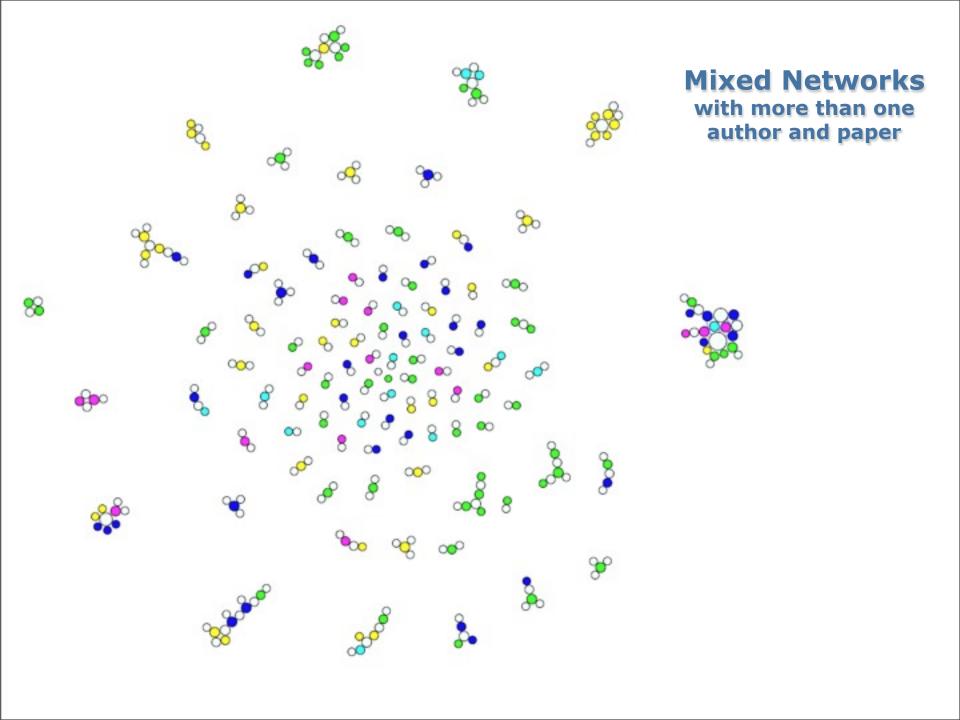
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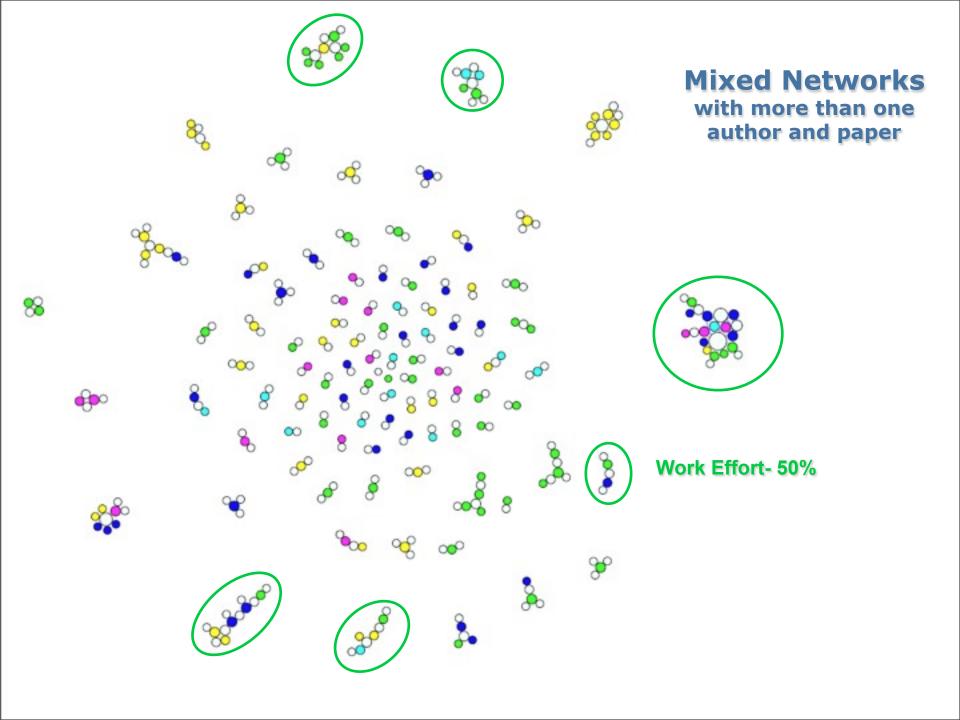
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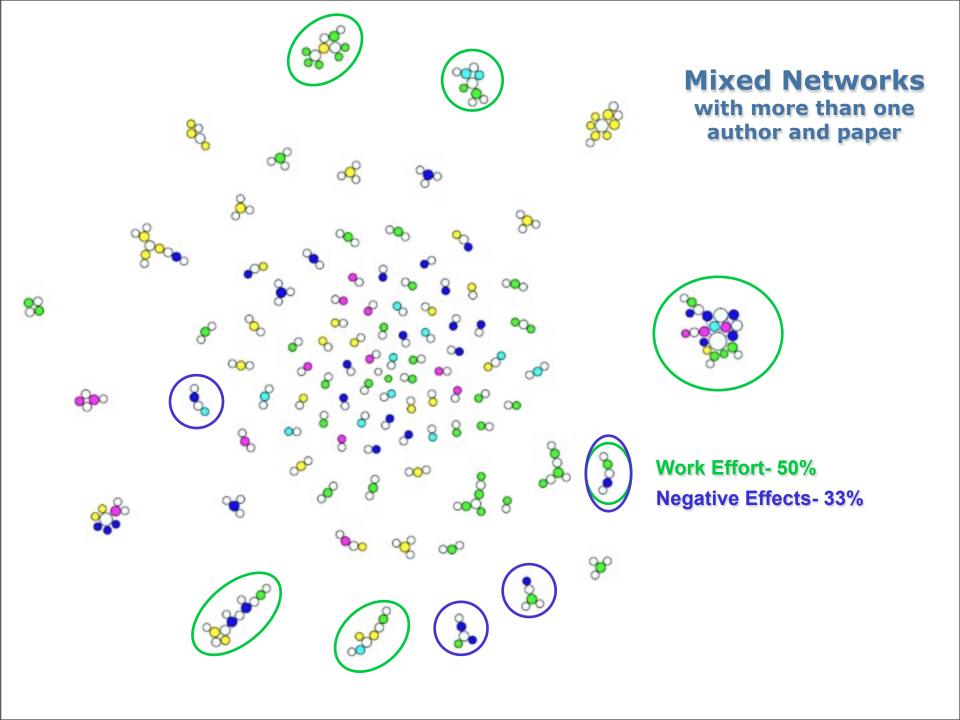
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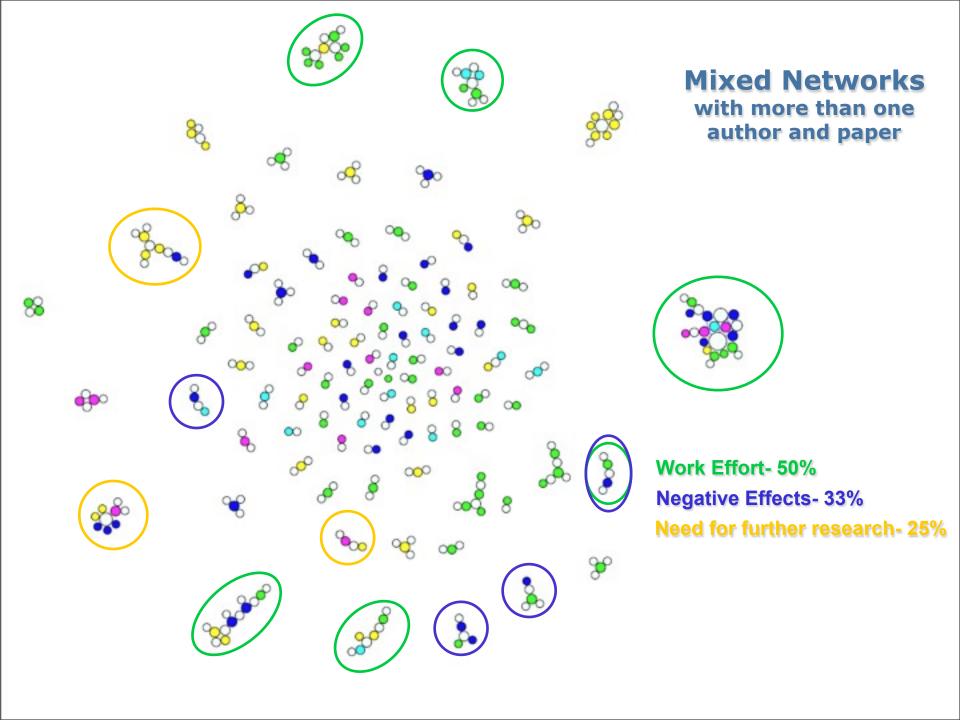
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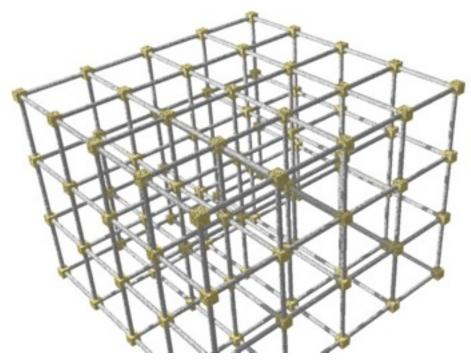


Top Ranking Criticism of CPTED

- There is a significant problem with effective communication and collaboration between CPTED stakeholders and a major reluctance for planning professionals to engage with crime prevention practice
- Designers assume that one size fits all
- There is a reluctance to engage with communities at a local level, and interventions are often 'top down'



CPTED Frameworks in Academia



Aim: to evaluate the diversity of CPTED frameworks within academic literature and assess the clarity of the academic knowledgebase.

- Systematic analysis of CPTED literature
- Directed Content Analysis of CPTED frameworks
- Conceptual Mapping



Framework Definition

For the purpose of this research:

A framework can be seen as a set of concepts organised to facilitate the understanding and operationalisation of a complex overlapped crime prevention approach.

A framework should aim to organise the component parts of the approach in a suitable format leading to the understanding of the complex relationships and drivers behind them.



Literature Sample

Inclusion Criteria:

- Illustrate a CPTED framework version
- Published in an academic document of any format

Exclusion Criteria:

- Non English documents where no translation could be obtained
- Documents published prior to 1972

64 documents formed a representative subset of all academic CPTED literature in terms of framework provision.

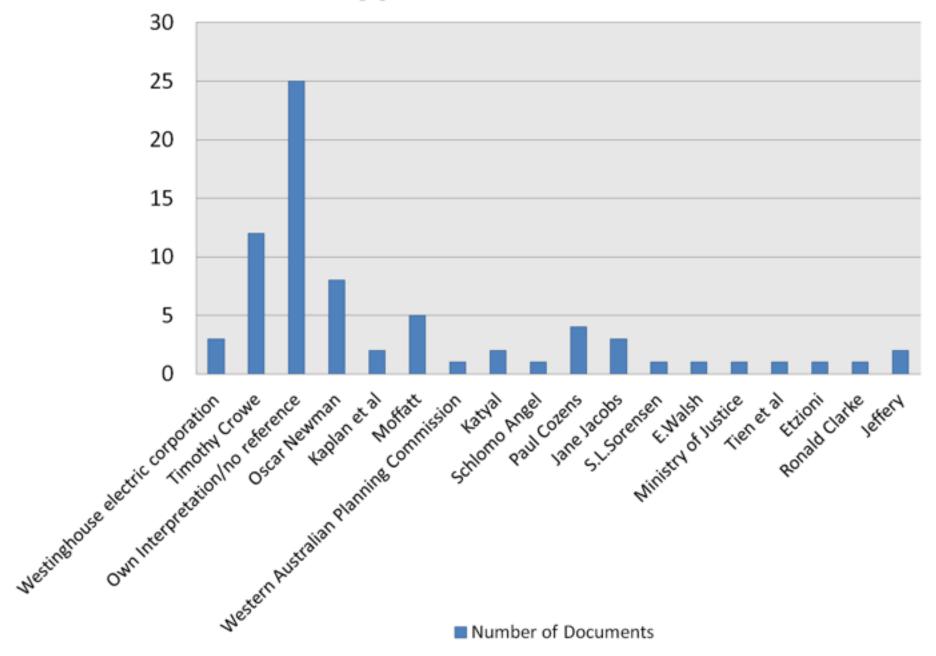


Academic Framework Results

Extremely varied and diverse CPTED terms and concepts



Number of Supported Framework Sources



Territoriality

- Deeper issues beyond definition
- Question of position within the CPTED structure
- Previous frameworks propose territoriality as one of a group of concepts,
 becoming a concept that can be considered alone.
- Often referred to with prescriptive design solutions

'Natural behaviour by which organisms characteristically lay claim to an area and defend it against members of their own species' Henry Eliot Howard (1920)

 Territoriality proposed as a mechanism to be reached only through the facilitation of legitimate human behaviour.















Operational Tasks

Physical Design

Technology



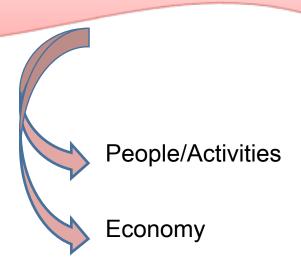
People/Activities



Operational Tasks

Physical Design



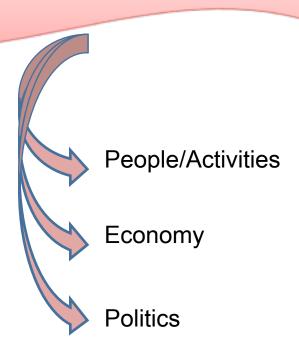




Operational Tasks

Physical Design



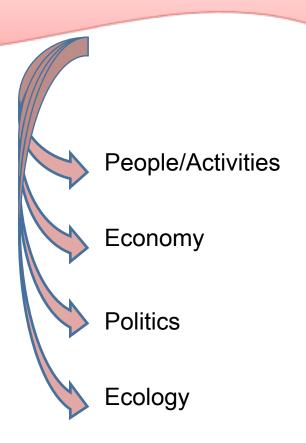




Operational Tasks

Physical Design



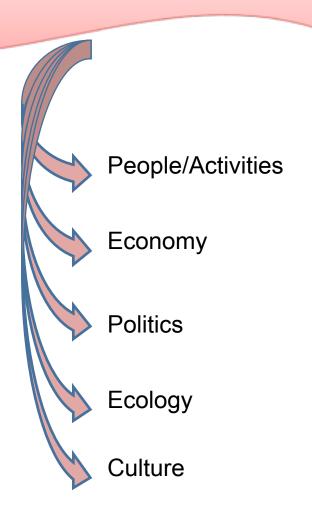




Operational Tasks

Physical Design









Operational Tasks

- CCTV monitoringInformal
- Guardianship
 Reporting offences

Preparatory Tasks

- CCTV
- LightingPolice Patrol
- Security Guards

Concept 1

Surveillance

Informal

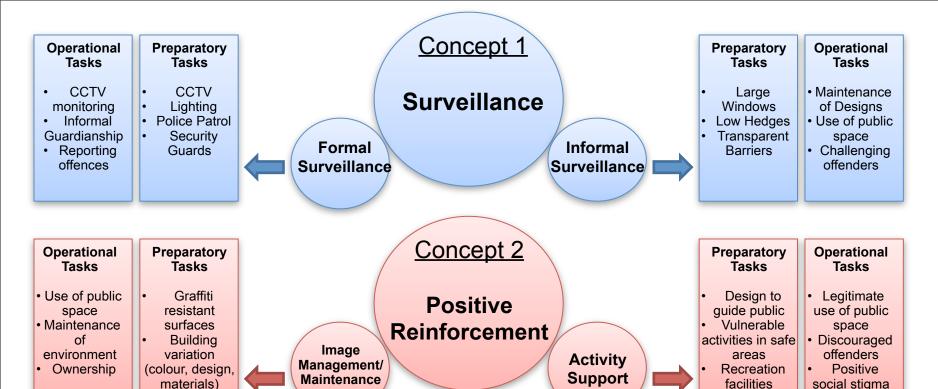
Surveillance

Formal Surveillance

Preparatory Tasks

- Large Windows
- Low Hedges
- Transparent Barriers

- Maintenance of Designs
- Use of public space
- Challenging offenders



social stigma

facilities

Operational Tasks CCTV monitoring Informal Guardianship Reporting

offences

Preparatory Tasks

- CCTV
- LightingPolice Patrol
- Security
 Guards

Concept 1

Surveillance

Formal Informal Surveillance

Preparatory Tasks

- Large Windows
- Low Hedges
- Transparent Barriers

Operational Tasks

- Maintenance of Designs
- Use of public space
- Challenging offenders

Operational Tasks

- Use of public space
- Maintenance of environment
- environmentOwnership

Preparatory Tasks

- Graffiti resistant surfaces
- Building variation (colour, design, materials)

Concept 2

Positive Reinforcement

Activity Support

• R

Preparatory Tasks

- Design to guide public
- Vulnerable activities in safe areas
- Recreation facilities

Operational Tasks

- Legitimate use of public space
- Discouraged offenders
- Positive social stigma

Operational Tasks

- Security guards
- Police patrol
- Challenging offenders

Preparatory Tasks

- Mechanical locks
- Improved building security standards

Concept 3

Access Control

Target Hardening

Image

Management/

Maintenance

Boundary Definition



Preparatory Tasks

- Delineation between public + private space
- Symbolic and Physical Boundaries

- Assertion of control over public and private space
- Identification of offenders

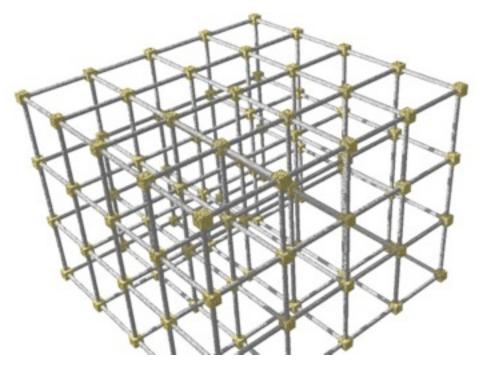


Academic Framework Discussion

- Provision of a significantly diverse knowledge base and framework guidance for CPTED
- Opportunity for the maximum potential of CPTED strategies may be hindered
- Significant paucity of studies to take on the facilitation of a holistic framework
- Substantial gap in knowledge for this research to fill
- Academia is yet to provide a universal language and framework for clear dissemination



CPTED Frameworks in Practice



Aim: To evaluate a snapshot of the professional knowledge base available to and used by professionals when considering a crime prevention approach within design

Systematic content analysis





Questionnaire (8 closed and open questions)

- World Wide Web
- Interest group forums
- Professional Newsletters:
 - Royal Institute of Chartered Surveyors (RICS)
 - Royal Institute of British Architects (RIBA)
 - Association of Chief Police Officers (ACPO)



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International Study

- UK
- Ireland
- USA
- The Philippines
- Australia
- Canada



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International Study

- UK
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- The Philippines
- Australia
- Canada

Professions

- Planners
- Architects
- Urban Designers
- Crime and Security Consultants



Methodology

Systematic analysis of documents

Research Question:

Is there structured guidance on developing crime prevention in the design of the built environment, and does that guidance follow the concepts and principles of CPTED within academia?

Primary content analysis categories:

- Contains a crime prevention *framework* (analysed using qualitative coding techniques)
- Discusses crime prevention but no framework (excluded from further analysis)

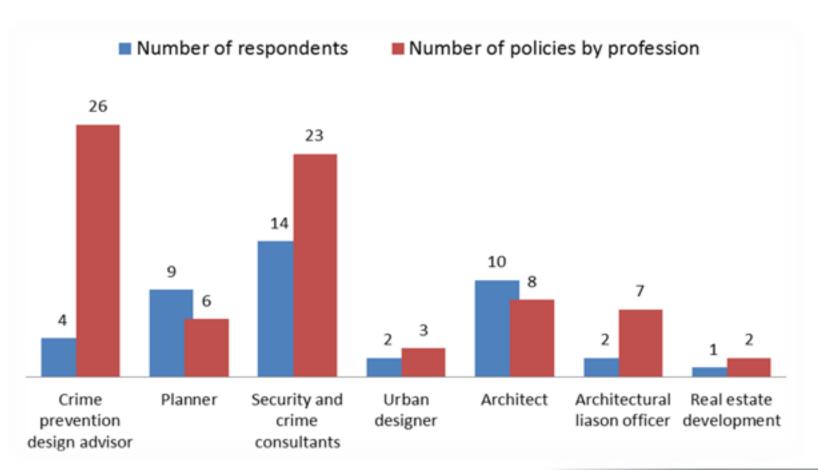


Inclusion Requirements

- Relate to the design of the built environment
- Contain more than one crime prevention concept
- Provide an unambiguous explanation or definition of the concept meanings in relation to crime prevention (those without definition, lack context and are therefore unable to align with academic concepts)



Respondents Professions vs. Knowledgebase Documents



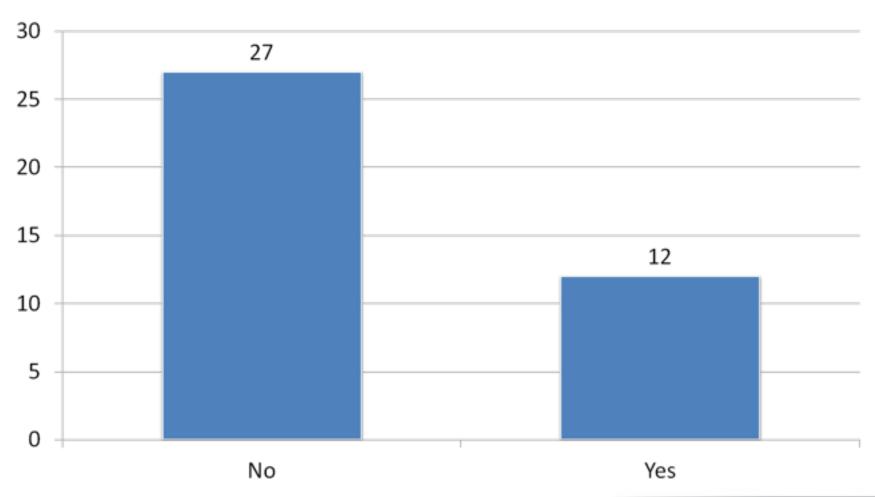


Results

Extremely varied and diverse CPTED terms and concepts

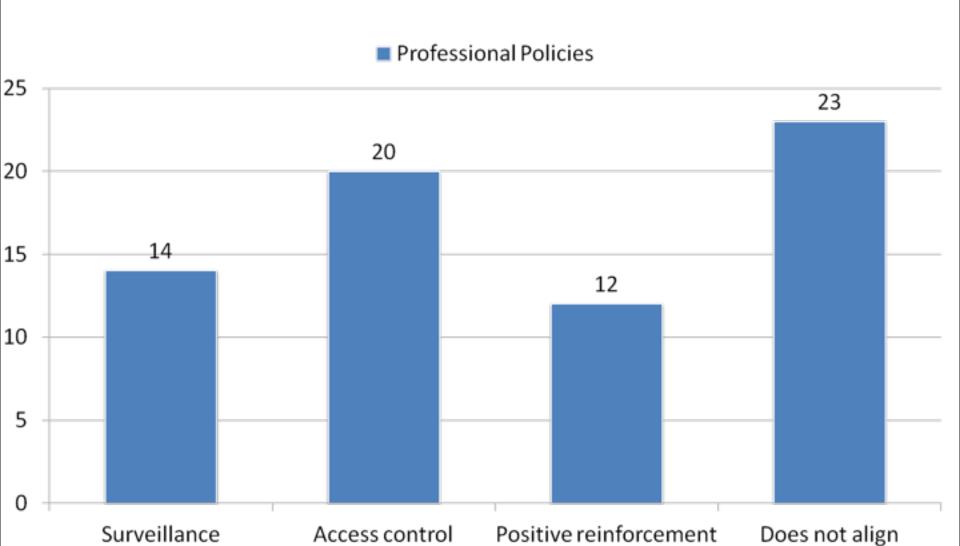


Professional Policies Containing a Crime Prevention Framework





Relationship between Academic and Professional CPTED Frameworks





% of

Alignment

80%

40%

100%

57%

42%

57%

100%

66%

66%

14%

100%

40%

Alignment with Academic

Principles

4/5

2/3

4/4

4/7

3/7

4/7

4/4

2/3

2/3

1/7

4/4

2/5

Policy	Alignment with Academic Principles							
Policy	Number of concepts in the framework	Informal Surveillance	Formal Surveillance	Access Control	Target Hardening	Activity Support	Image Management/ Maintenance	4
1.Designing for community Safety Supplementary Planning document (Newcastle Council)	5	2	0	2	0	0	1	
2.Designing out crime, supplementary planning document (Carlisle Council)	3	1	1	1	0	1	1	
3. Crowded Places: The planning system and counter	4	1	0	0	3	0	1	

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4. Safer Places- The planning system and crime

5.Protecting Crowded Places: Design and technical issues

6.National guidelines for Crime Prevention through

Environmental design in New Zealand Part 1: Seven

7.Crime Prevention Through Environmental Design

10.Greater Manchester Local Authorities UDP/SPD

(CPTED) Security Handbook Oakland Police

8.Defensible space by Oscar Newman

terrorism

prevention

qualities of Safer Places

9. Timothy Crowe's CPTED

policies on designing out crime,

11.NSW guidelines. "Safer by design"

12Welsh assembly government tams 12

Results

- **39** different policies were collected from **42** respondents and **no** identical frameworks were provided (indicates no industry standard)
- **26%** of respondents did not refer to or use any formal policy, framework or set of guidelines in relation to developing crime prevention
- **69**% of documents were excluded from further textual analysis because they did not contain a framework or set of guidelines
- No single framework covered all 3 CPTED concepts mentioned earlier

- The 6 principles were identified separately with **36** different definitions using **43** different topic/ theme headings (huge disparity of terms between research and practice)
- 39% of definitions in practice did not align with CPTED concepts/principles in academia
- **50%** of the frameworks had components which were categorise more than once (significant confusion)



Overall Conclusion

- Academia is lacking in provision of a holistic CPTED framework
- Extremely low levels of engagement from practitioners
- Feedback from respondents suggested that further research would be problematic due to engagement
- Majority of professional documents failed to provide a recognisable and functional crime prevention framework
- There is a demonstrable gap between research and practice knowledge
- There is significant confusion and diversity within academia and within built environment professions

Concluding Statement

If CPTED is to be acknowledged as a valid and worthwhile design component, then a common language, through a common knowledgebase must be brought to the fore; without dictating outcomes, or failing to acknowledge the value of flexibility and innovation which is equally essential.

Thank You

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