



# Crime prevention through environmental design: Application to Christchurch City planning practices

Charlotte IRVING

*Bachelor of Environmental Management and Planning Student, Lincoln University, New Zealand*

## 1. INTRODUCTION

With unprecedented growth in urbanisation, globalisation and global mitigation have arisen new challenges in maintaining public security and safety. A sustainable community should be widely considered safe, thus urban sustainability should essentially embrace additional measures for crimes and the fear of crime (Cozens, 2007). Consequently, to promote the public's well-being in today's cosmopolitan cities, it is imperative for governments to reach beyond their traditional "target hardening"<sup>1</sup> and policing approach by considering innovative, contemporary strategies to prevent crime and ensure public safety (Sundberg, 2013).

A large amount of academic research (Jacobs, 1961; Newman, 1972; Jeffery, 1971; Kelling & Coles, 1996) supports the assumption that crime can be reduced through informative urban planning and design. Crime Prevention Through Environmental Design (CPTED) originates from the theory of Jane Jacob's radical book *The death and life of great American cities* (1961), and the subsequent research of Oscar Newman (1972), C. Ray Jeffery (1971), and George Kelling and Catherine Coles (1996). These academics contested the orthodox urban renewal theories, and pushed towards a revolutionary movement, the current, sustainable New Urbanism movement.

Following the publications regarding defensible space and urban crime prevention, many cities expressed interest in what is currently known as the discipline of CPTED (Ziegler, 2007). On a local level, it is evident that the ideas stemming from these environmental planning theorists have influenced the development of a set of

practical design suggestions for improving the safety of public areas and inhibiting crime in Christchurch. Throughout this essay I will analyse the Christchurch Safer Community Council's (CSCC) document written by Doeksen in 1996 titled *Reducing crime through environmental planning and design* (RCTEPD), and discuss how the relevant contemporary environmental crime prevention theorists and theories have influenced its content.

## 2. CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN: THEORISTS AND THEORIES

As mentioned above, the concept of defensible space was introduced in Jane Jacob's book *The death and life of great American Cities* (1961) and Oscar Newman's book *Defensible space* (1972). C. Ray Jeffery then developed the concept of CPTED further. CPTED associates effective crime control and improved quality of life with innovative physical urban planning and design, and has been adopted in many global urban contexts. CPTED theorists draw upon the notion of environmental determinism; the basic idea that the way individuals live their lives is directly connected to the designed environments that they live in (Eades, 2012).

Jacobs suggests that high-density urban streets and environments that were well maintained generally possessed low occurrences of crime and were observed as being highly desirable places to reside, work and visit (Sundberg, 2013). According to Jacobs (1961) and Newman (1972), bustling, energetic sidewalks deter most violent crimes, especially as the streets become supervised and defended by individuals whom enjoy watching the street activity (otherwise known as "eyes on the street"). For this reason, Jacobs (1961) advocated

<sup>1</sup> "Target hardening" refers to measures taken to increase the security of a building, such as putting locks on doors and windows.

diverse land use and the abolition of zoning laws, as she believed neighbourhoods with multi-functional areas (residential, commercial, leisure) attract a constant stream of pedestrians of different ages during the day and night, guaranteeing natural and informal surveillance. This contrasts from Ebenezer Howard's (1982) theory that commercial, industrial and residential areas should remain separate within the Garden City. Despite this, the underlying theme of active, relatively compact, multifunctional areas encouraging ongoing surveillance are prevalent throughout the RCTEPD document. For example, Section 8.3 states that "mixed and compact... commercial, cultural, recreational and residential facilities must be strongly supported in order to have people in the streets and behind the windows looking out... at any time of the day or night" (Doeksen, 1996). In fact, a large component of the RCTEPD document features strategies to promote informal surveillance such as using low street fences, providing adequate pedestrian lighting, locating high-use elements within parks (such as toilets and playgrounds) where they can be observed from adjacent streets, concentrating areas of night life, and ensuring plantings do not obscure lighting.

Jacobs's strong support for dense, vibrant urban environments influenced her deriding the prevailing so-called "decentrists": planning advocates such as Ebenezer Howard (the pioneer of the Garden City) and Frank Lloyd Wright (founder of the Broadacre City) (Wendt, 2009; Callahan & Ikeda, 2003). These urban renewal theorists supported isolated and private neighbourhoods (Hall, 1982), believed that the street was a bad locus for human interactions, and suggested that dwellings should be turned away from the street toward sheltered green spaces (Christens & Speer, 2005).

Jacobs (1961) openly despises low-density urban environments and blames the failure of Detroit due to its "endless square miles of low-density failure" (p. 204). It is interesting that Doeksen (1996) supports Jacobs' idea for a compact city, to effectively attract a variety of people to the city, creating a safer public environment, and also to add economic efficiencies. Although Le Corbusier (advocator of the Radiant City) and Jacobs possessed one potential zone of agreement, the necessity for high-density urban environments (Hall, 1982), Jacobs (1961) created a scathing review of Le Corbusier's design theory. She drew a parallel between the deserted streets of the "decentrists" and the isolated interiors of the extreme centralised high-rise skyscrapers advocated

by Le Corbusier. Supporting Jacobs' theory, Newman (1972) also argues with reference to his research on New York high-rise apartments that crime is fostered in these buildings as they jeopardise social interactions in public spaces and the corridors are screened from the public vision (Wendt, 2009). Communities are left feeling like they have no control or personal responsibility for such a densely populated area.

It is noteworthy that Doeksen (1996) states that a safe neighbourhood is one in which people feel responsible for shared public space, and is therefore clearly influenced by both Jacobs' (1961) and Newman's (1972) ideas. This assumption is supported by the unsuccessful intensive Pruitt-Igoe housing development that was destroyed from a controlled explosion in 1972, despite its harmonious aspirations, as the isolated interiors of the blocks were "notorious for violence, vandalism and chaos" (Moore, 2012).

Jacobs (1961) developed the notion that crime thrives when individuals do not meaningfully network with their neighbours, as they would be uncertain to distinguish an outsider who may be a criminal. Newman (1972) adds to this, stating that attributes such as mutual ethnic backgrounds and religious values are commonly no longer shared among residents in neighbourhoods, leaving them feeling disconnected with their neighbourhood and more vulnerable to criminals. Doeksen (1996) was clearly influenced by these thoughts, as he notes that like other urban areas, Christchurch has experienced a "general decline in community spirit" and acknowledges that this can cause a number of problems. He then offers further guidelines on how to promote a safer neighbourhood, such as welcoming new neighbours, developing neighbourhood support groups and clearing mailboxes when neighbours are away to give the appearance of occupancy to reduce burglary occurrences (Doeksen, 1996).

Resonating with Jacobs' and Newman's works, Kelling and Coles (1996) introduced the broken window theory: the perception that relatively minor visible deterioration, neglect and abandonment in neighbourhoods cause violent crime, targeted vandalism and associated fear. It is relevant that property maintenance features as a strategy in the RCTEPD document. In conjunction with this, Doeksen (1996) also suggests encouraging development of vacant community buildings and sections that could otherwise become areas that attract vandalism and other criminal activity.

New Urbanism advocates a revitalised vision of

high-density, vibrant, mixed-use, pedestrian-orientated urban developments as an antidote to faceless suburban sprawl (Fishman, 1982; Cozens, 2008), making it evident that Jane Jacobs' ideas that evolved from *Death and life* underpin this important movement (Wendt, 2009). The New Urbanism design has been endorsed to decrease crime by encouraging social street interactions, walkability and increased surveillance opportunities, which in turn promotes a stronger sense of community (Cozens, 2008). As the RCTEPD document is heavily influenced by Jacob's theory, it becomes no surprise that it is a strong expression of the New Urbanism movement.

### 3. DISCUSSION

It is apparent that the RCTEPD document is grounded on the theories developed by Jacobs, Newman and Jeffery, particularly those relating to informal surveillance. Due to its reliance of these theorists' generalised ideas, the document is unspecific to Christchurch's location and features (e.g. Hagley Park and the Central Business District [CBD]), crime history, and income and ethnicity separation throughout the city. There is no reference to the crime hotspots of Christchurch, such as Aranui. This could be a weakness of the document as crime is associated with low-income areas, locking these areas into a downward spiral of low property values and limited private investment, hence greater poverty and deprivation (UNHSP, 2009; Goodchild, 2008). Also, according to Ziegler (2007), due to significant variances in the "culture of crime" between diverse cities, the one-size-fits-all methodology is destined to fail. The most effective place-based CPTED strategies are those which specific geographic, economic, social and cultural elements of the target community are taken into account, rather than intuition (Cozens, 2002; Ziegler, 2007). However, in Doeksen's defense, the document was only ever intended to be a simple, standardised set of guidelines offering suggestions for planners on how to design a safer physical environment. Planners can then effectively research the spatial patterns of crime in Christchurch, and apply their CPTED efforts and the council's funding to the areas most in need.

Another weakness of the CSCC document is that it was developed in 1996, 15 years before the devastating series of Christchurch earthquakes. Not only did the earthquakes have a significant impact on infrastructure, job stability, and neighbourhood cohesion, they also changed crime patterns. Although the earthquake

initially led to an increase in burglary (NZPA, 2011) and family violence offences (Bellamy, 2014) in greater Christchurch, the total recorded crime fell significantly by 22.2 percent from 2010 to 2011 in the aftermath of the earthquakes (New Zealand Police, 2013). This is likely to be a result of many variables such as people migrating from greater Christchurch and the remaining communities becoming more connected (CERA, 2014). In addition, the CBD, historically a high crime location, was closed as a result of the earthquake, and additional police and military patrolled the area.

One might expect that the earthquakes would be able to test the validity of CPTED strategies. Perhaps the CPTED theory should now be questioned, as despite having fewer "eyes on the street" around the city, an increase in "broken windows", more vacant spaces, and high barriers excluding informal surveillance, crime has remarkably decreased. However, as the earthquake indicates, crime is extremely dynamic and complex, and is influenced by irrational behaviours (Saraiva & Pinho, 2011). Thus, the effectiveness of CPTED is very difficult to measure as it is part of a much larger picture of crime prevention in which many elements (such as social programmes, community cohesion, and employment levels) intertwine and influence each other. Furthermore, Du Plessis (1999) justifiably states that although CPTED in isolation is incapable of representing a solution to the multifaceted problem of crime, it can aid social and economic strategies. To be most effective, CPTED must be part of a comprehensive crime prevention strategy that integrates environmental, social, and community development initiatives.

### 4. CONCLUSION

CPTED is an important, convincing approach with proven benefits. Although it is challenging to measure its efficiency at reducing criminal activity, and the strategies are subject to criticism due to their generalised nature, many researchers have argued that the advantages are much greater. They are founded on logic, common sense, are inexpensive and enduring, and will ultimately decrease the costs of police surveillance. For this reason, the strategies have gained respect and feature in many city plans today. The rebuild of the Christchurch earthquake permits many opportunities to design a sustainable, innovative city that employs CPTED strategies. A city where residents feel safe, secure, and encompassed within their community.

## 5. REFERENCES

- Bellamy, P. (2014, October 8). *Social effects of Canterbury earthquakes*. Retrieved March 19, 2015, from New Zealand Parliament: <http://www.parliament.nz/en-nz/parl-support/research-papers/00PlibC51211/social-effects-of-the-canterbury-earthquakes>
- Callahan, G., & Ikeda, S. (2003, June). *Jane Jacobs, the anti-planner*. Retrieved March 19, 2015, from Mises Institute: <http://mises.org/library/jane-jacobs-anti-planner>
- CERA. (2014, June). *Canterbury Wellbeing Index: Offending patterns*. Retrieved March 19, 2015, from CERA: <http://cera.govt.nz/sites/default/files/common/canterbury-wellbeing-index-june-2014-sec09-offending-patterns.pdf>
- Christens, B., & Speer, P. (2005). *Predicting violent crime using urban and suburban densities*. *Behavior and Social Issues*, 14, 113-127.
- Cozens, P. (2008). *New urbanism, crime and the suburbs: a review of the evidence*. *Urban Policy and Research*, 26 (4), 429-444
- Cozens, P. (2007). *Planning, crime and urban sustainability*. *Sustainable Development and Planning*, 102, 187-196.
- Cozens, P. (2002). *Sustainable urban development and crime prevention through environmental design for the British city. Towards an effective urban environmentalism for the 21st century*. *Cities*, 19 (2), 129–137.
- Doeksen, H. (1996). *The Garden City, a safe city: Reducing crime through environmental planning and design* (2nd Edition ed.). Christchurch: Christchurch Safer Community Council.
- Du Plessis, C. (1999). *The links between crime prevention and sustainable development*. *Open House International*, 24 (1), 33-40.
- Eades, G. L. (2012). *Determining environmental determinism*. *Progress in Human Geography*, 36 (3), 423-427.
- Fishman, R. (1982). *Urban utopias in the twentieth century: Ebenezer Howard, Frank Lloyd Wright, Le Corbusier*. MIT Press.
- Goodchild, B. (2008). *Homes, cities and neighbourhoods*. Ashgate Publishing.
- Hall, P. (1982). *The seers: Pioneer thinkers in urban planning, from 1880 to 1945*. In P. Hall (Ed.), *Urban and Regional Planning* (2<sup>nd</sup> ed., pp. 42-82). Pelican Books.
- Jacobs, J. (1961). *The death and life of great American cities*. New York: Vintage Books.
- Jeffery, C. R. (1971). *Crime prevention through environmental design*. SAGE Publications.
- Kelling, G., & Coles, C. (1996). *Fixing broken windows: Restoring order and reducing crime in our communities*. New York: The Free Press.
- Moore, R. (2012, February 26). *Pruitt-Igoe: death of the American urban dream*. Retrieved March 19, 2015, from The Guardian: <http://www.theguardian.com/artanddesign/2012/feb/26/pruitt-igoe-myth-film-review>
- New Zealand Police. (2013, April 2). *Canterbury crime remains below pre-quake levels*. Retrieved March 19, 2015, from Scoop Media: <http://www.scoop.co.nz/stories/AK1304/S00026/canterbury-crime-remains-below-pre-quake-levels.htm>
- Newman, O. (1972). *Defensible space; crime prevention through urban design*. New York: Macmillan.
- NZPA. (2011, April 19). *Christchurch police warn of increasing quake crime*. Retrieved March 19, 2015, from The New Zealand Herald: <http://www.nzherald.co.nz/nz/news/article.cfm?id=1&objectid=10720457>
- Saraiva, M., & Pinho, P. (2011). *A comprehensive and accessible approach to crime prevention in the planning and design of public spaces*. *Urban Design International* 16 (3), 213–226.
- Sundberg, K. (2013, December). *Preventing crime through informed urban design*. Retrieved March 19, 2015, from Safe Design Council: <http://www.safedesigncouncil.org/preventing-crime-through-informed-urban-design>
- UNHSP. (2009). *The emergence and spread of contemporary urban planning*. In UNHSP, *Planning sustainable cities: global report on human settlements* (pp. 57-71). Kenya.
- Wendt, M. (2009). *The importance of death and life of great American cities (1961) by Jane Jacobs to the profession of urban planning*. Retrieved March 19, 2015, from School of Public Policy & Administration: <http://www.sppa.udel.edu/sites/suapp.udel.edu/files/The%20Importance%20of%20Death%20and%20Life%20Final.pdf>
- Ziegler, E. (2007). *American cities, urban planning, and place based crime prevention*. *The Urban Lawyer*, 39 (4), 859-876.