

**2ND GENERATION CPTED:
An Antidote to the Social Y2K Virus of Urban Design**

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In this paper we look at applying new ways of thinking about what we do as crime prevention practitioners to improve the communities, schools and workplaces we occupy. We begin with CPTED. There is an emerging belief that some of the basic assumptions of Crime Prevention Through Environmental Design (CPTED) have been only partly correct. Practitioners, such as urban planners, police officers, building managers, and theoreticians, such as academics and researchers, have relied on incomplete practices that have yet to be expanded into a more holistic theory of human behavior. Currently, such a holistic theory is yet to emerge, but there is an evolving practice we call “second generation CPTED” that suggests it is not far away. A 2nd generation CPTED offers the promise of greatly enhanced, and more realistic, preventive strategies. Equally important, it offers the possibility of a new approach for community-building that strikes to the heart of what CPTED is really all about - what visionary Jane Jacobs was talking about over three decades ago.

In her dialogue on morality, commerce and politics in, Systems of Survival (Vintage: 1992) Jacobs begins with a quote from Emerson who reminds us that “all things have two handles” and that we must “beware of the wrong one.” Perhaps with our focus on the physical design aspects of CPTED we have, to use Emersonian terms, grabbed the wrong handle. Have we forgotten that what’s significant about Jacob’s “eyes on the street” are not the sightlines or even the streets, but the eyes? Jacob’s synecdoche – using eyes to represent entire neighborhoods of watchers – reminds us that what really counts is a sense of community. When we fail to “design” our affective conditions that help generate that sense of community, with the same careful scrutiny as the physical, we are doing less than half the job. Recently at a conference when we recommended parenting courses within troubled neighborhoods and community outreach programs as viable 2nd Generation CPTED strategies, a respected CPTED practitioner rolled his eyes in frustration and stated, “That’s not CPTED.” In terms of what we have been practicing for many years, he was right. In terms of a more holistic “environmental design,” he couldn’t have been more wrong. Second Generation CPTED recognizes the most valuable aspects of safe community lie not in structures of the brick and mortar type, but rather in structures of family, of thought and, most importantly of behavior. We may benefit

from starting with an examination of the physical aspects of place, but we must end up looking at the social aspects of home and neighborhood – the affective environment. Before moving on to our consideration of the affective environment, we should have a quick look at what made us *grab that other handle*.

The Theory of the Rational Offender

Since at least the 1970s, it has been understood that some architectural and planning designs have unintentionally created areas that facilitate the opportunity for crime. (Becker, 1975; Brantingham and Brantingham, 1978; Bennet and Wright, 1985; Saville, 1991; Zehring, 1994). The theoretical basis of this work emerges from what are now called Rationality models (Cornish and Clarke, 1984). These models describe how many offenders have some level of rational behavior, especially with offences in public places. Offenders evaluate alternative courses of action, weigh rewards, and chose targets.

The Rationality explanation suggests that, on one hand, offenders may follow a logical decision tree where at each step they choose whether to carry on. This decision making process is influenced by environmental factors, “cues”, and this is where CPTED plays a role. Furthermore, this kind of offender learns which cues work and which do not, or what the Brantingham’s call an offender cognitive template. If the area fits the offender’s template, a target is selected and the probability and risk of an offence increases.

Conversely, the decision to commit may not have to be optimal, only satisfactory. From this perspective the offender will rarely have full information on targets to make optimal decisions. Therefore the offender’s learned experiences play a role in target selection. This is where environmental cues come into play, and it is where the environmental land uses and neighborhood image encourage, or discourage, the commission an offence.

The Rationality theory makes some interesting, and debatable, assumptions about human behavior - namely that behavior is influenced by the physical place. Early CPTED, including assigning territory, access control, and natural surveillance, adopts these assumptions. Indeed this has been the reason for its success. By designing shopping mall parking lots with plenty of natural surveillance crime opportunities have been reduced. By avoiding construction of movement predictors that locate potential victims in high-risk areas on their way to work, home, shop, and play, places have been made safer. Targets have been made harder for offenders by the use of enhanced lighting, security locks, and fences to control access into residences and apartment buildings. These are all examples where the rationality model of CPTED has made sense. And there is a great deal of research that supports this model.

Applying Rational theory: CPTED in the early years

Oscar Newman (1972) broke the concept down to four key elements:

- surveillance
- territoriality
- image
- milieu (environmental land use)

It is interesting to note that, with each element, there are factors that influence crime opportunities not suggested simply by design alone. These are the limitations of Rationality theory and they suggest why it needs elaboration into a 2nd stage. The four elements, and some of their limitations are:

Surveillance

In the UK, proponents such as Alice Coleman and Barry Poyner felt that design of housing can influence crime by denying, or offering, opportunities for offending. They also believed that the design of buildings might encourage various uncivilized behaviors and crime. Today this works in the important British program called *Secure By Design*. For example, in this program certificates are awarded to housing projects when certain surveillance criteria are met: for example, inward facing residential homes in cul de sacs to encourage residents will see common areas. The result is that this will reduce the opportunity for such crimes as burglary. (White, 1994; Beavon, 1988; Bevis and Nutter, 1977). But the research has also emphasized that social dynamics between residents in the cul de sac are also key mediators of environment, not just design. The Rationality model by itself is not enough in the case of surveillance.

Territoriality

The design of an area can influence the sense of community or ownership for those who are legitimate users of the space. When users develop a sense of territoriality they are more likely to challenge or question those who do not belong.

One design that enhances territoriality is access control. By designing access routes that specifically define where the general public is welcome and restricting or monitoring access to private property decreases the opportunities for criminal activities. Access control of building entranceways and target hardening using security hardware are tactics used to control entry or egress to restricted areas or private property. These typically include the use of window locks, dead bolts, security alarms and closed circuit television cameras (cctv).

Another tactic to enhance territoriality is the design of areas to create land uses that emphasize local ownership. This reduces the potential for creating conflicting spaces between different user groups. Tactics include distinguishing between private, semi-private, semi-public and public spaces. This “hierarchy of space” can be achieved by creative landscaping, using symbolic barriers, changing the ground cover, or by changing the grade. But territoriality is not simply a matter of design. Research has also shown that territoriality is also influenced by how long people live in an area, and how central that place is to people’s social lives (Brown and Altman, 1981). In other words, how those residents form a social attachment to a particular place.

Many places have social attachments that do not conform to basic CPTED principles. For example, many communities have important memorial sites such as military or political structures situated out of natural sightlines. These often escape any form of vandalism or damage. Natural surveillance and access control matter little with these sites that are crime free: social attitudes matter a great deal. Schools, churches and individual homes that are valued and respected by the community often escape the crime that swirls around them. Again, the physical environment often has little to do with their exemption from criminal or anti-social behaviors.

Image

The image of a place is an important factor in reducing opportunities for crime. In recent years Wilson and Kelling (1982; 1989) have expanded this notion in their “broken windows” theory. Maintaining a certain level of repair sends an environmental cue of whether or not a location is valued. Yet, there are areas where many windows are broken and where dilapidated conditions exist, and yet few crimes occur. Why?

Milieu: Environmental land use

Milieu was a more controversial aspect of early CPTED, and for the most part it refers to environmental land uses. Although not specifically identified as such in Newman’s early work, environmental land use has been seen as a factor influencing defensible space. It refers to two features: adjoining land uses and the influence of surrounding activities on a place; and how a site can be protected by specific design styles.

Housing mix is also important. Newman said housing districts should be homogeneous to encourage “communities of interest”, so that people will associate with each other. Communal units and bonds will be formed in neighborhoods like this. However, further research indicates that a diverse housing mix is preferable to create a “truer” community, and also to have more people present at all times of day. Single use zones such as “bedroom communities” are generally vacant during different time periods. Mixed housing encourages mixed lifestyles and overall

occupancy levels. In the Netherlands, these two concepts have been combined in the Grunfeld Principle (Ministry of Justice, 1995), which states that housing image and territoriality can be reinforced by placing a homogenous neighborhoods (100-500 dwellings) in heterogeneous districts (no larger than 3000 dwellings).

But there are also areas where zoning has little influence on the amount of crime. There are diverse neighborhoods with plenty of social mix where crime is rampant, where people do not exert a territorial influence. Examples exist in cities of heterogeneous districts under 3000 dwellings, containing smaller, homogenous neighborhoods of under 500 dwellings, where crime is rampant. The Rational offender does not always fit into a rational place if the “ingredients” are not just right. Clearly there are many things that will motivate an offender, and at some level many of these factors are social, not physical.

The theory of second-generation CPTED

What are the linkages between physical and social development?

The Dutch CPTED guidelines are instructive. They are all linked to some basic CPTED strategy: territoriality and access control, natural surveillance, image, and environmental land use. They also represent some of the most advanced CPTED strategies to date, as they incorporate the pattern language of Christopher Alexander and apply them to safe urban design. We believe that at least five of these categories represent the beginning of a new theory of second-generation CPTED. All of these have direct links to the social aspects on how neighborhoods work, although we have some reservations on how they currently apply to CPTED design.

1. Size of the district, density, and differentiation of dwellings – human scale development. It is probable that there is an environmental influence on social interaction, which is why planners call for “human scale” development. This has been suggested by Dutch “Gruenfeld principle”: it is difficult to get to know someone when your neighborhood consists of 100 homes, when your apartment building has over 300 units, and when the high school has over 3,000 students. Size can affect the alienation of a place. Yet, size alone is not an explanation for the lack of territorial feelings in a place. Tokyo, Japan has the largest urban population and among the highest urban density in the urban world, yet it also has the lowest reported crime rates. Clearly, culture and social feelings of personal respect and responsibility play a large role.

2. Urban meeting places. The provision of urban meeting places is an absolute necessity in neighborhoods. A lack of an urban meeting place can make urban spaces empty and dangerous. This is why many regional shopping malls fail to become places of community gathering, or if they do, that gathering occurs with unsupervised youth in the food courts. Schools that do not permit students places to meet informally also fail to build an appropriate sense of shared belonging in the

building. But urban meeting places can be used for many different reasons, such as by drug and stolen property dealers. Other social events must happen before a neighborhood will experience the neighborliness that can occur in an urban meeting place. Someone must organize social events, or sporting activities. Someone must take the lead. This is a social factor. The environmental influence of the urban meeting place is not enough. We believe that neighborhood schools are best positioned to take the lead, especially since they offer a familiar place to children and adults in the community.

In the late 1970's this CPTED concept was called "activity support". An urban area requires some kind of activity support to help the physical design work to create defensible space. Of course, merely stating that activities needed to be supporting did very little actually help it to happen. Few strategies were offered by early CPTED practitioners to create that activity support. Second-generation CPTED takes that responsibility and places it where it belongs: in the care of community members, not planners or architects.

3. Youth clubs. The creation of youth clubs has been a crime prevention and community-building strategy ever since the Chicago Area Project from 1930s (Shaw and McKay, 1942). They have become places where local youth can find something to do, and places where they can learn life skills. Of course these places require the interest and support of the local community, the resources to run activities, and the skilled personnel who know what to do. Many high-crime housing complexes have common buildings and club areas that are underused, or abused by gang members. Social factors again are directly linked to the environmental influence of CPTED designs.

4. Residents' participation. This concept applies directly to the idea of "activity support", or that the residents' themselves will participate in a neighborhoods social life. Again, although early CPTED claimed this to be a strategy, it does not occur simply because it is stated. There must be specific strategies associated with its implementation, because there are many reasons why residents will not participate in community life:

- they may be a two-income household, working long hours, and are simply too tired to do things at night when they're home from work;
- they may be elderly people who are fearful of unsupervised youths in the neighborhood;
- they may have their own independent network of friends, for example based on a religious or ethnic group or a political ideology, which they prefer to the local neighborhood and consequently partake in only a few community events.

5. Residents' responsibility. This is the most curious of the Dutch CPTED guidelines. It suggests that residents' responsibilities have a direct influence on their expression of territoriality and defensible space. While offenders may seek out easy targets, potential victims can protect themselves by exerting some defensible space

over a place thereby making a place unattractive to a rational offender. But residents must take some responsibility over their neighborhood for this to happen. We assume that physical design will help this happen, but as noted above with resident participation, this is by no means a sure thing. Herein lies another reason why the Rationality theory is limited. It suggests why a possible target might be rational for an offender, but it says little about the victims' rationality. It says little about why potential victims do not necessarily defend their own places, nothing about why some residents engage in destructive social events and why some do not. The Rationality theory has been offender, not victim, centered. Second generation CPTED aims to expand this perspective.

Implications for contemporary CPTED

Atlas has claimed that there is a need for a community to create barriers in some circumstances. When there is social breakdown in a place, barricades, road closures, and guard gates have a function, if limited. These can reinforce proprietorship and sense of belonging. "One of the tenets of defensible space theory is that the physical environment can create perceived zones of territorial influences (Newman, 1972). Newman suggested that certain environmental features tend to encourage residents to exercise territorial control, thereby reducing the opportunity for, and fear of, crime." (Atlas and LeBlanc, 1997).

We are suggesting that if environmental influences are only one simple step in the community-building process, then barriers may only reinforce feelings of fear of the surrounding neighborhood outside the barriers. There is nothing inherently safe about an internally gated community, except that it may be occasionally more difficult for the simple rational offender to victimize the simplest target. In the public realm, building a ten-foot wall around a school yard to keep out guns and dealers *may* help, but without true community-building strategies both inside and outside those walls, will this environmental modification serve anyone but the construction company? Walls such as these are, in the parlance of our time, a Y2K virus for future development. For a sustainable, ecological, approach to crime prevention, we must address the *social* Y2K virus.

In school environments it makes little sense to use this "fortress mentality" approach. Bright lights and heavy locks may make the staff feel safe, but nothing will have changed in the immediate vicinity when we release our students at the end of the day. Student participation in crime reduction programs, better conflict resolution skills and student and parent problem solving courses are much more effective in establishing "spaces" that can foster both positive learning and a true sense of well-being. Schools are expected to be welcoming and inviting. Weapon wands, entry scanners, armed security guards and drug dogs might be effective turn-around strategies, but they are disheartening blockades to school officials who wish to create a perception of belonging and safety.

Solving the *social* Y2K virus: an ecological approach to community-building

We are suggesting that 2nd generation CPTED is a new form of ecological, sustainable development. This ecological and sustainable development must, of course, use traditional CPTED design principles. But the problem with limiting CPTED to the rational offender model is that it is too narrow and offender-centered. Ultimately, in the next millenium, it is not sustainable as a model. As a narrow preventive tool, we can make proper use of it, but we should never see it as a model for future development. For starters, we need to expand our efforts into the realm of residents' responsibility, residents' participation, youth activities, urban meeting places, and human scale neighborhoods.

What does this mean? It means we need to live in smaller, locally based, neighborhoods. We need to live near where we work where we go to school and where we socialize. We must develop ways to encourage more local contacts for social, economic, and political interaction. We should have more opportunities for friendships and family in neighborhood contexts without sacrificing our important needs for personal space and privacy. Just as we plan physical places, so too must we begin to plan the affective, social, zones of our community.

We have relied on the large systems for survival: large economies of scale; massive schools with 2,000 students, empirically-based scientific and tertiary academic institutions; large organizations, big government and large-scale places of employment. These are no longer viable in our turbulent social environment. They are too slow, too inflexible, and too unresponsive. We have been learning about the advantages of small, sustainable systems: small business and locally-based, sustainable economies; holistic, and open-minded programs, non-governmental agencies, not-for-profit ventures, local organizations and flexible companies based on personal networks. This will not happen in a day, but it can be a future antidote to the *social* Y2K virus that currently plagues our communities.

A prescription for the future

We must cultivate skills in neighborhood building at a local, small-scale. These skills must include values based on ecological principles, and on the values of a healthy community. Such a place is able to heal itself if it gets sick. This means having opportunities to meet with neighbors who play a meaningful role in our lives. It means local opportunities for play and work. It means respecting personal choice and privacy, while still creating common places and events of social interaction that allow us to celebrate our diversity. It also means that these factors are structured in such a way to create an affective community environment, whether it be a workplace, a school, a market, or a residential neighborhood, that has a capacity to resolve it's own problems on its own terms.

There are many practical strategies that exist, elaborated at length elsewhere, that can help practitioners incorporate second-generation CPTED (Saville, 1995; Wekerle and Weitzman, 1995; Sarkissian et al, 1996; Saville and Cleveland, 1998). Some of them include:

1. Safety audits
2. Search conferences

3. Community accords – including capacity for building partnerships
4. Neighborhood restraints
5. Activities, including the framework to implement programs
6. Building capacity for local decision making
7. Community planning for the following:
 - decision making processes;
 - conflict resolution; and
 - social interactions.

These are the hallmarks of the new CPTED. If we are able to effect change by considering factors beyond the physical we will have grasped our community problems by both “handles.” As Thoreau tells us, “the highest of arts is to affect the quality of the day”. When our CPTED solutions finally include both the physical and the social to become truly ecological, we will have enhanced the *quality of the day* for ourselves, our children, and for the communities in which we live.

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