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[About APA](#)
[Membership](#)
[Events](#)
[Education](#)
[Outreach](#)
[Resources](#)
[Jobs & Practice](#)

Search

**City Parks Forum**

Briefing Papers

Community Revitalization

Community Engagement

Economic Development

**Safer Neighborhoods**

Green Infrastructure

Help Children Learn

Improve Public Health

Arts and Cultural Programs

Promote Tourism

Smart Growth

Climate Change Management

Case Studies

Bibliography



**Executive Summary**

For those concerned that green spaces may foster crime and illegal activity, evidence now exists that the opposite may be true. When adjacent to residential areas, green spaces have been shown to create neighborhoods with fewer violent and property crimes and where neighbors tend to support and protect one another. These are the findings of scientists at the Human-Environment Research Laboratory of the University of Illinois at Urbana-Champaign who studied green space alongside public housing in Chicago. Other researchers who are conducting similar studies across the country are finding similar results.

The factors that explain these findings emphasize the importance of greenery in community and personal wellness. Time spent in natural surroundings relieves mental fatigue, which in turn relieves inattentiveness, irritability, and impulsivity, recognized by psychologists as precursors to violence. Green spaces also support frequent, casual contact among neighbors. This leads to the formation of neighborhood social ties, the building blocks of strong, secure neighborhoods where people tend to support, care about, and protect one another.

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**Key Point #1**

Time spent in nature immediately adjacent to home helps people to relieve mental fatigue, reducing aggression.

**Key Point #2**

Green residential spaces are gathering places where neighbors form social ties that produce stronger, safer neighborhoods.

**Key Point #3**

Barren spaces are more frightening to people and are more crime prone than parks landscaped with greenery and open vistas.

**Key Point #4**

In order to make the best use of greenery and open space, it must be positively incorporated into a community's design.

**KEY POINT #1:**

*Time spent in nature immediately adjacent to home helps people to relieve mental fatigue, reducing aggression.*

The University of Illinois scientists have concluded that parklike surroundings increase neighborhood safety by relieving mental fatigue and feelings of violence and aggression that can occur as an

outcome of fatigue. The three classic symptoms of mental fatigue are inattentiveness, irritability, and poor impulse control, each of which has been previously linked to aggression.

Time spent in nature relieves mental fatigue specifically by restoring directed attention capacity, which is the ability to concentrate and pay focused, effortful attention. Like a muscle, directed attention capacity fatigues with exertion (such as through working, studying, or driving in traffic) and recovers with rest. The sights and sounds of nature absorb individuals effortlessly, during which the concentration rests and renews.

In a study recently published in the *Journal of Environmental Psychology*, researchers looked at stress recovery and directed attention restoration in a group of young adults. Each subject was given an attentionally demanding task (driving to an unfamiliar site). Upon their arrival, subjects were split into two groups, with one group sitting in a room with tree views followed by a walk in a nature reserve, and the other group sitting in a viewless room and walking in an urban setting. Performance on an attentional test improved for the nature group. In addition, subjects in the nature group reported less anger and greater positive affect following the nature walk; the urban group had the opposite results.

When concentration is restored, so is the ability and willingness to handle tasks and problems thoughtfully and calmly. With convenient access to spaces that relieve mental fatigue and foster mental restoration, families and communities may become safer.

#### **KEY POINT #2:**

*Green residential spaces are gathering places where neighbors form social ties that produce stronger, safer neighborhoods.*

The University of Illinois researchers found that residents who live near outdoor greenery are more familiar with their nearby neighbors, socialized more with them, and expressed greater feelings of community and safety than did residents lacking nearby green spaces. Shade trees figured importantly in the use of outdoor spaces. The more trees existed in a space, the more heavily the space was used by people of all ages.

Green spaces are settings for frequent, informal interaction among neighbors that nurtures the formation of neighborhood social ties. Research has shown that these ties are the glue that transforms a collection of unrelated neighbors into a neighborhood. They are the heart of a neighborhood's strength. When ties are weak, people feel isolated and unsupported. When ties are strong, people feel empowered to help and protect each other.

The value of green space in prompting the formation of neighborhood ties is exemplified by redevelopment that occurred in the historic East Falls section of **Philadelphia** in the 1990s. The area surrounding the Chelsea apartments was converted from a scene dominated by factories and warehouses to a residential neighborhood replete with modest yet welcoming green spaces that gave residents a place in which to socialize (Rodriguez, 1996). Referring to the green space one resident said, "It's nice because often in an apartment community people don't have an opportunity to meet each other. The park gives us an outdoor area to enjoy together. It's really used a lot."

Another vital green space within this community was converted from a driveway to a series of patios shaded by pear and birch trees. The patios lie between two buildings that were converted to townhouses. The space succeeds so well as a social catalyst that residents call it the Melrose walkway after the TV soap opera, *Melrose Place* (Rodriguez, 1996).

The conspicuous presence of people outdoors contributes further to safety by increasing surveillance, which discourages criminals. More people outdoors means that threatening behavior is more likely to be observed. At the same time, potential criminals are deterred by the sense that they are being noticed and watched.

#### **KEY POINT #3:**

*Barren spaces are more frightening to people and are more crime prone than parks landscaped with greenery and open vistas.*

Some community leaders are inhibited from proposing new parks or supporting existing ones out of concern that parks can be settings for crime and illegal activity. However, when properly planned, parks and greenways adjacent to residential areas may help to shield against crime.

The University of Illinois researchers tested the conventional wisdom that, in the inner city, barren spaces are safer than spaces with trees and greenery that could hide illicit activity. The study compared crime rates for inner-city apartment buildings with varying amounts of vegetation and found that the greener the surroundings, the fewer crimes occurred against people and property.

The scientists compared crime rates for apartment buildings with little or no vegetation to buildings with high levels of vegetation. They found that roughly half as many crimes (48 percent fewer property crimes and 56 percent fewer violent crimes) were reported in buildings with high amounts of vegetation. In addition, buildings with medium amounts of vegetation had 42 percent fewer total crimes (40 percent fewer property crimes and 44 percent fewer violent crimes) than did buildings with low levels of vegetation. Far from shielding criminals, nearby vegetation seems to shield against them.

These findings were consistent with prior studies that found that urban residents who live in green surroundings experience fewer quality-of-life crimes such as littering and graffiti, and fewer incivilities, such as noisy or disruptive neighbors. In other studies, people reported feeling safer in residential areas that contained greenery.

In **Providence, Rhode Island**, through the early 1990s city officials launched a tree-planting program that converted barren, unused open spaces into treed oases. As a result of their efforts, a number of the oases became gathering points for neighborhood recreational and social functions (Davis, 1992).

Researchers in **Austin, Texas**, used a geographic information system (GIS) to determine if there was a relationship between the greenness of various neighborhoods and their crime levels. They found that areas with less than the average amount of greenness had more crime. ([aggie-horticulture.tamu.edu/syllabi/435/article.doc](http://aggie-horticulture.tamu.edu/syllabi/435/article.doc))

#### **KEY POINT #4:**

*In order to make the best use of greenery and open space, it must be positively incorporated into a community's design.*

New parks and open space should be developed within residential developments so that nature is close to home. It is critical that these spaces are carefully designed to support the activities for which they were intended; that requires that each space have an intended purpose. If the purpose of the space is to promote social interaction, it should be located where frequent, casual encounters by neighbors are likely to occur. In addition, shade trees are proven attractants for neighbors to mingle and form social ties.

If the intention of the park or open space is to promote restoration, areas that can be left green and pervious will help people relax and will reduce feelings that lead to aggression. While law enforcement officials have historically recommended removing vegetation to eliminate cover for criminal activity, vegetation that maintains visibility actually fosters feelings of safety. Widely spaced high-canopy trees, grass, flowers, and low-growing shrubs do not block views, and allow the user to become oriented to the setting. This understanding of one's surroundings is important in that letting down one's guard and becoming absorbed in the natural environment promotes restoration (Kaplan, 1998).

Where parks already exist, their maintenance is critical. A well-maintained park or open space sends a message that someone cares about it. In turn, the message that someone cares about the park helps create a perception of safety. The greater the perception of safety, the more likely the park will be used. In addition, maintenance programs that include participation by the users help establish a sense of ownership and promote stewardship of the space.

It is also critical that the community be included in planning and programming the open space. In **Macon, Georgia**, Mayor C. Jack Ellis, the Village Green community, and Village Hope, a nonprofit organization, worked together to use a CPF grant to revive the Village Green park as a crime prevention activity. The addition of a picnic shelter, tables, and grills, a new playground unit, new basketball goals, and park beautification efforts have increased park use by more than 25 percent. In addition, the parks and recreation department, along with the police athletic league, are sponsoring athletic programs in the park. Neighborhood watch groups are coordinating programs with the police precinct assigned to Village Green, and citizens are volunteering their time at the precinct to answer phones and do other needed tasks. Citizens now care more about their neighborhood, and incidents of crime or violence have dropped by more than 50 percent!

#### **Resources**

Along with the citations below, data for this briefing paper were drawn from the Coping with Poverty archive, a multi-study research project examining the effects of the physical environment on the functioning of individuals, families, and communities residing in urban public housing.

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#### **Of Special Note**

All referenced University of Illinois studies were conducted at public housing developments in Chicago in which study participants had highly similar demographic characteristics and uniform apartments. The only factor that systematically differentiated participants was the amount of greenery outside of their apartments.

The USDA Forest Service Urban and Community Forestry Program supported much of the research noted in this briefing paper on the recommendation of the National Urban and Community Forestry Advisory Council. Findings do not necessarily reflect the views of the USDA Forest Service. The Cooperative State Research, Education and Extension Service, the U.S. Department of Agriculture, and the University of Illinois also provided research funding.

For more information on the work of the University of Illinois Human-Environment Research Laboratory, please go to [www.herl.uiuc.edu](http://www.herl.uiuc.edu) or contact the University of Illinois at Urbana-Champaign, Human-Environment Research Laboratory, 1103 S. Dornier Dr., Urbana, IL 61801; phone (217) 333-1965.

The Human-Environment Research Laboratory of the University of Illinois at Urbana-Champaign is a multidisciplinary research laboratory dedicated to studying the relationships between people and the environments they inhabit. The mission of the lab is to generate information about human-environment relationships to guide policy, planning, and design of environments. The lab's scientists explore how to create environments in which individuals, families, and communities flourish, and how to better involve people in the design, management, and stewardship of their local environments.

### City Parks Forum Briefing Papers

This is one in a continuing series of briefing papers on how cities can use parks to address urban challenges. We hope the information here helps you to create great urban parks in your city.

*Photo of Mercy-Bush Park Courtesy of Bob Weaver Photography.*

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