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Natural Versus Nonnatural Value Theories

- ▶ [Value Theories](#)

Naturalistic Objectivist Value Theories

- ▶ [Value Theories](#)

Naturalistic Subjectivist Value Theories

- ▶ [Value Theories](#)

Nature and Well-Being

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Synonyms

Biophilia; Nearby parks and quality of life;
 Neighborhood green spaces; Urban forests

Definition

There is strong evidence indicating that everyday contact with green spaces – parks, open spaces with trees and grass, and even areas with street trees – can enhance the resources necessary to manage the demands and pressures of modern living.

Description

There is growing recognition that the environments in which we live, work, and play have considerable impact on our health. The conditions of modern living (work and life pressures and the physical places we inhabit) threaten the ▶ [health](#) of billions of people across the earth. The combination of chronic stress and unhealthy settings puts individuals at higher risk for cardiac disease, stroke, and obesity. The psychological strain also threatens mental health.

There is mounting evidence, however, that exposure to some aspects of the built environment can enhance the resources necessary to manage the demands and pressures of modern living. Places that provide views of, or direct exposure to, trees and other forms of vegetation are associated with an increased sense of ▶ [well-being](#), higher levels of self reported peace and quiet, and greater satisfaction with home and neighborhood, less crime, lower levels of domestic violence, and, for some urban residents, lower levels of mortality.

How is it possible that such diverse outcomes could be associated with exposure to green spaces? Scholars agree that there are at least three mechanisms or pathways through which exposure to green spaces impacts well-being. Settings that include trees, grass, and open space have been shown to reduce the symptoms of mental ▶ [fatigue](#) and promote recovery from ▶ [stress](#). And green places promote stronger ties among neighbors and seem to support the development of social capital – which we know has important consequences for ▶ [health](#). These three mechanisms are described in turn below ([Fig. 1](#)).

Nature and Well-Being,

Fig. 1 Neighborhood green spaces promote well-being by reducing the symptoms of mental fatigue, aiding in the recovery from stress, and by creating settings in which nearby neighbors can get to know one another (Photo by W. Sullivan)

**Recovery from Mental Fatigue**

Everyday contact with nearby nature helps restore and replenish a resource that is essential to functioning in our modern world: our ability to pay attention. As anyone who has ever written or graded a paper, planned a budget, solved a difficult social problem, or even planned a vacation can attest, one's ability to pay attention is not only limited, but it is also essential to accomplishing all our goals.

Attention Restoration Theory recognizes that humans have two modes of absorbing information. Some objects, ideas, settings, and situations are effortlessly engaging and require no work as we take them in. Kaplan and Kaplan call this mode *involuntary attention* (1989). Other stimuli and settings oblige us to focus on the matter at hand, that is, they require us to pay attention or, as the Kaplans say, to *direct attention*.

Our capacity to direct our attention is subject to fatigue. Just like muscles that require rest after a period of intense use, our capacity to deliberately direct attention declines with use. The costs of attentional fatigue (what many call mental fatigue) are considerable. An individual experiencing mental fatigue will have a reduced ability to concentrate and is likely to become irritable, distractible, impulsive, and accident-prone. Thus, it is not surprising that mentally fatigued individuals are more likely to have trouble meeting their goals.

Kaplan and Kaplan observed that settings and stimuli that draw primarily on involuntary attention give directed attention a chance to rest

and restore. They note that contact with nature should assist in the recovery from mental fatigue because green settings draw primarily on involuntary attention (Kaplan & Kaplan, 1989; Kaplan, 1995). And indeed, there is a wealth of evidence to support this view.

Evidence demonstrating the impact of exposure to nearby nature on individuals comes from a variety of settings: the workplace, homes, schools, hospitals, and community gardens. At home, for instance, the research shows that views of, and direct exposure to, nearby nature will increase resident's cognitive functioning (Kuo & Sullivan, 2001; Rappe & Kivela, 2005), sense of well-being (Day, 2008; Kaplan, 2001; Rappe & Kivela, 2005; Rappe, Kivela, & Rita, 2006), sense of peace and quiet (Day, 2008; Yuen & Hien, 2005), and satisfaction with home and neighborhood (Kaplan, 2001; Kearney, 2006; Lee, Ellis, Kweon, & Hong, 2008).

The benefits of exposure to nearby nature seem to be available across the life span. For children, exposure to nature near home and school is associated with enhanced cognitive functioning (Matsuoka, 2010; Taylor & Kuo, 2009). For adults, significant reductions in mental fatigue were associated with views of, or walks within, urban green spaces (Berman, Jonides, & Kaplan, 2008; Ogunseitan, 2005). In older adults, regular access to natural settings has been associated with enhanced powers of concentration (Jansen & von Sadowsky, 2004; Ottosson & Grahn, 2005; Rappe & Kivela, 2005) (Fig. 2).

Nature and Well-Being,

Fig. 2 Even small pockets of nature can create views that help individuals restore their capacity to pay attention (Photo by W. Sullivan)

**Recovery from Stress**

An individual's capacity to moderate the demands and pressures of everyday life has profound and far-reaching consequences for their health and well-being. Chronic stress can lead to significant health problems such as an increased risk for cardiac disease (Curtis & O'Keefe, 2002; Leenen, 1999) and stroke (Brook & Julius, 2000; Julius, 1998; Julius & Valentini, 1998). What may be surprising to learn is that everyday exposure to nature has been shown to reduce levels of stress.

Philosophers and poets have written about the tranquility and serenity associated with nature (Emerson, Thoreau, Whitman), and scientists have shown that exposure to urban nature is related to an increased capacity to deal with difficult life problems (Kuo & Sullivan, 2001); increase "peacefulness," "tranquility," and "relaxation" (Ulrich, 1993); and reduce the physiological indicators of stress (Chang & Chen, 2005; Parsons, Tassinary, Ulrich, Hebl, & Grossman-Alexander, 1998; Ulrich et al., 1991). Today, perhaps more than ever, given the chronic stress that grows from modern living (e.g., commuting, parenting, financial woes, work-related stress, relationship stress), the link between exposure to nature and lower levels of stress is welcome news.

Given the well-established links between chronic stress and the onset of disease, some scholars have wondered if there might be a link between having greater contact with urban green spaces and living longer. And indeed, there is

evidence for such an association. In a study of older people in Tokyo, individuals living near an urban green space were found to live longer than their counterparts who lived in less green areas of Tokyo. This study found that living in areas with walkable green spaces was positively associated with longevity of senior citizens independent of their age, sex, marital status, baseline functional status, and socioeconomic status (Takano, Nakamura, & Watanabe, 2002). In other words, after taking into account conditions that are known to be associated with longevity (e.g., married people tend to live longer), this study found that access to green space was a significant predictor of how long a person lived. The greater the access to green spaces, the longer the person tended to live.

A study of all residents of England between the years 2001 and 2005 extended these findings. Mitchell and Popham (2008) classified the population of England at younger than retirement age ($n = 40,813,236$) into groups on the basis of income and exposure to green space. They obtained individual mortality records ($n = 366,348$) and established that an association between income and mortality varied by exposure to green space. Mitchell and Popham report that all-cause mortality and mortality from circulatory diseases were lower in populations living in the greenest areas. The effects were particularly impressive for individuals in the middle- and low-income categories.

Although we do not yet know the dose-response curve for the impact of green space on

Nature and Well-Being,

Fig. 3 Individuals who live in relatively barren neighborhoods seem not to recover from a stressful experience as quickly as someone who has access to green neighborhood spaces. Recent research indicates that green views may be associated with longevity (Photo by W. Sullivan)



the experience of stress – that is, we cannot yet prescribe a certain dose of nature to deal with a specific level of stress – there is compelling evidence suggesting that exposure to urban green spaces reduces the level of stress that individuals feel and that, over the years, these lower levels of stress result in longer, healthier lives (Fig. 3).

Enhancing Neighborhood Social Ties

Thus far, we have seen that having everyday exposure to nearby nature reliably reduces mental fatigue and stress. A third way in which greener settings enhance well-being is by promoting social ties among neighbors.

A number of recent studies demonstrate the positive impacts that access to urban nature can have on the amount of social interaction, and ultimately the strength of social ties among neighbors. These are important findings because social integration and the strength of social ties are powerful predictors of well-being and, for older adults, of longevity. But how might greener spaces promote stronger social relations among neighbors?

Neighborhood green spaces seem to enhance ties among neighbors by drawing residents from their homes and providing places in which neighbors greet and get to know one another (Sullivan, Kuo, & DePooter, 2004). The contrary is also true; people avoid barren outdoor spaces and, in doing so, miss opportunities to create a stronger neighborhood social fabric in places that are devoid of trees.

Among residents of an urban public housing neighborhood, researchers found that higher levels of nearby vegetation (e.g., trees, grass)

were associated with greater use of outdoor spaces (Coley, Kuo, & Sullivan, 1997) and higher levels of social activity in the neighborhood (Kuo, Sullivan, Coley, & Brunson, 1998; Kweon, Sullivan, & Wiley, 1998; Sullivan et al., 2004). Furthermore, residents of buildings with more trees and grass report that they know their neighbors better, socialize with them more often, have stronger feelings of community, and feel safer and better adjusted than do residents of more barren, but otherwise identical buildings (Kuo et al., 1998).

The social benefits of green neighborhood spaces are not restricted to individuals who live in public housing neighborhoods. On school grounds, more natural playscapes are associated with more active, social play among children (Dyment & Bell, 2008; Fjørtoft, 2004; Herrington & Studtmann, 1998). Community gardens have been linked with increased social interaction leading to improved social networks among neighbors (Armstrong, 2000), increased community building among nearby neighbors (Teig et al., 2009), and enhanced interpersonal relationships among juvenile offenders (Cammack, Waliczek, & Zajicek, 2002).

By increasing opportunities for residents to meet and interact, greener neighborhood spaces facilitate the development and maintenance of neighborhood social ties. Compared to barren neighborhood settings, greener settings are considerably more supportive places for the development of vital neighborhoods (Fig. 4).

Discussion

In this entry, we have seen that views to, and experiences in, urban green spaces provide

Nature and Well-Being,

Fig. 4 Green neighborhood spaces provide opportunities for neighbors to get to know one another. Research shows that individuals who live near green spaces have stronger ties to their neighbors than do their counterparts who live in more barren surroundings (Photo by W. Sullivan)



a variety of benefits to psychological health and well-being. When individuals are exposed to urban nature on a regular basis, they show an enhanced capacity to concentrate and pay attention, greater ability to cope with the stressors in their lives, higher levels of ► [life satisfaction](#), and increased levels of psychological well-being.

It is clear that exposure to nature near places in which people work, reside, and recreate, as well as where individuals are hospitalized or educated, leads to a variety of psychological benefits that the vast majority of individuals would welcome in their own lives.

With our growing understanding of how everyday exposure to green spaces promotes well-being comes the responsibility to use this knowledge to create places in which individuals, families, and communities thrive. One way to make progress on this goal would be to ensure that residents have nature at every doorstep.

Cross-References

- [Community Support](#)
- [Green Exercise](#)
- [Health](#)
- [Peace of Mind](#)
- [Social-Ecological System\(s\)](#)
- [Social Support](#)
- [Stress](#)
- [Urban Design](#)
- [Well-Being, Philosophical Theories of](#)

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Nature Relatedness

► Affective Connection to Nature

Nature Relatedness and Subjective Well-Being

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Synonyms

Connectedness with nature and well-being; Environmental identity; Inclusion of nature in self; Interdependence with the environment; Love and care for nature