Restorative Environments

26.1.2021

SPT-E5020

Marketta Kyttä

Main source:
Joye, Y. van der Berg, A. (2019) Restorative Environments. In Steg. L. & : de Groot, J.I.M. Environmental Psychology: An Introduction. Wiley.

Photo: Unplash, Marius Gerome
Photo: Unplash

What would you recommend to a friend who is feeling stressed and worried? Go to sleep? See a funny movie? Or take a walk in the forest?

Chances are high that you will pick the latter option. Indeed, going into nature is probably among the most widely practiced ways of obtaining relief from stress and fatigue in modern Western societies. Perhaps many of you have increased the use of natural settings during the pandemic. Have you?

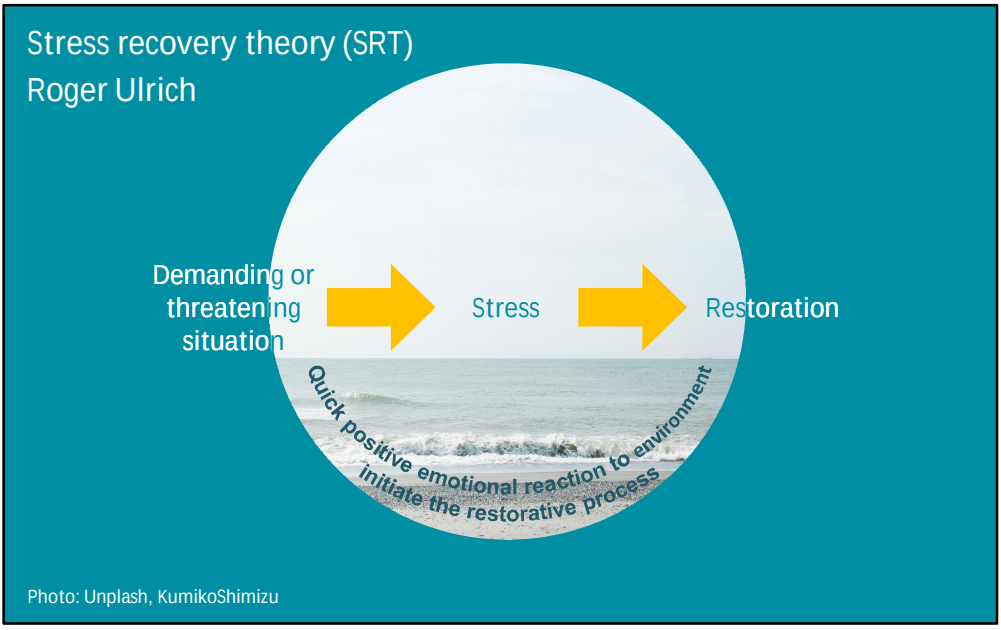
How can this be explained? More than 150 years ago, the American landscape architect Frederik Law Olmsted already noted that 'scenery worked by an unconscious process to produce relaxing effects and escape from the strain, noise and artificial surroundings of urban life'. This idea was strikingly modern laid ground for the very large body of research on 'restorative' or stress-relieving effects of nature. This theme is actually among the most widely studied themes in environmental psychology.

Two main theories

about the ways certain environments promote psychological or physiological recovery process

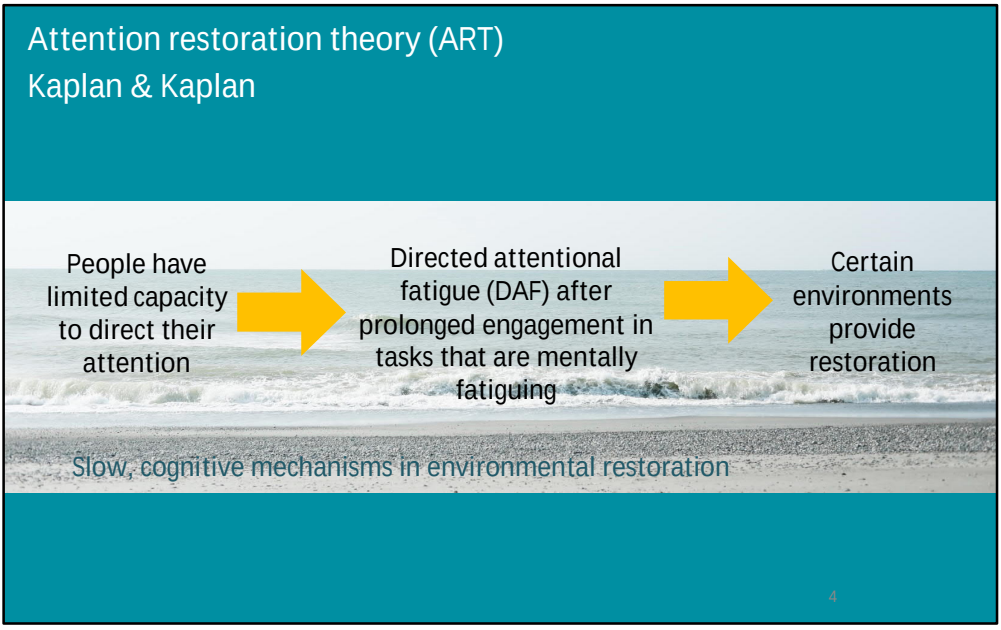
There are two main theories about the ways certain environments promote psychological or physiological recovery process. The two theories are generally regarded as complementary perspectives that focus on different aspects of the restorative process. Let me try to explain the basic ideas of them next.

The word restoration is an umbrella term that refers to the experience of a psychological and/or physiological recovery process that is triggered by particular environments and environmental configurations, i.e. restorative environments. A substantial number of experiments have shown that natural environments tend to be more restorative than urban or built environments. Exposure to restorative natural environments may contribute to well-being and the prevention of disease and illness.



First, stress recovery theory is concerned with restoration from the stress which occurs when an individual is confronted with a situation that is perceived as demanding or threatening to well-being.

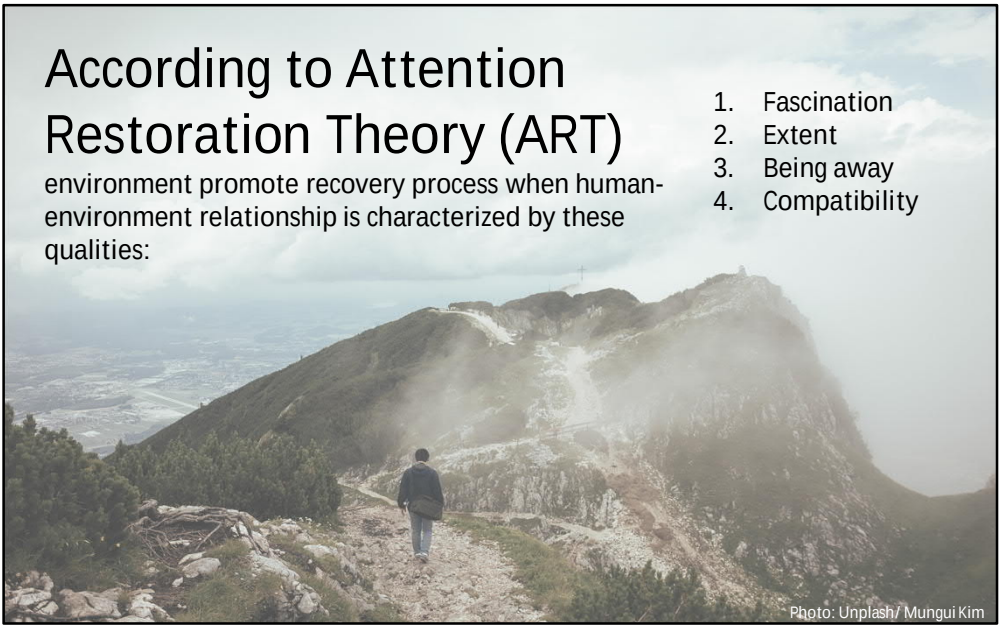
Roger Ulrich argued that people's initial response towards an environment is one of generalised affect (i.e. like, dislike), which occurs without conscious recognition or processing of the environment. Initial positive affective responses come about when specific environmental features are present in the environment. When these features include the presence of natural elements, a quick positive affective responses to these features initiate the restorative process because they provide a relief from stress, accompanied by liking and reduced levels of arousal and negative feelings such as fear.



The attention restoration theory focuses on the restoration from attentional fatigue that occurs after prolonged engagement in tasks that are mentally fatiguing. While the previous *stress recovery theory* considers restoration as a quick, affect-driven process, attention restoration theory emphasises the importance of slower, cognitive mechanisms in restoration.

The developers of the attention restoration theory are the same persons that created the four fold preference matrix, Stephen and Rachel Kaplan, but please remember that these two theories are not the same and they aim to explain different phenomenon in our relationship with environment.

A core assumption of ART is that people only have a limited capacity to direct their attention to something that is not in itself interesting. The prolonged or intensive use of this capacity can result in directed attentional fatigue. Certain environments can help in this fatigue and provide restoration.



And what kind of environments are these?
Kaplan and Kapan argue that when the human-environment relationship is characterised by four qualities:

- Fascination or the capacity of an environment to automatically draw attention without cognitive effort
- Extent or coherence meaning that the setting is rich and coherent enough to engage mind and promote exploration
- Being away from daily hassles and obligations so that the setting is physically and conceptually different from one's usual environment
- Compatibility between the individual's inclinations and the characteristics of the environment

It seems that the combination of these four qualities is most typical for human interactions with natural environments.


How to study
restorative
experiences?

Measuring the perceived restorative potential of environments

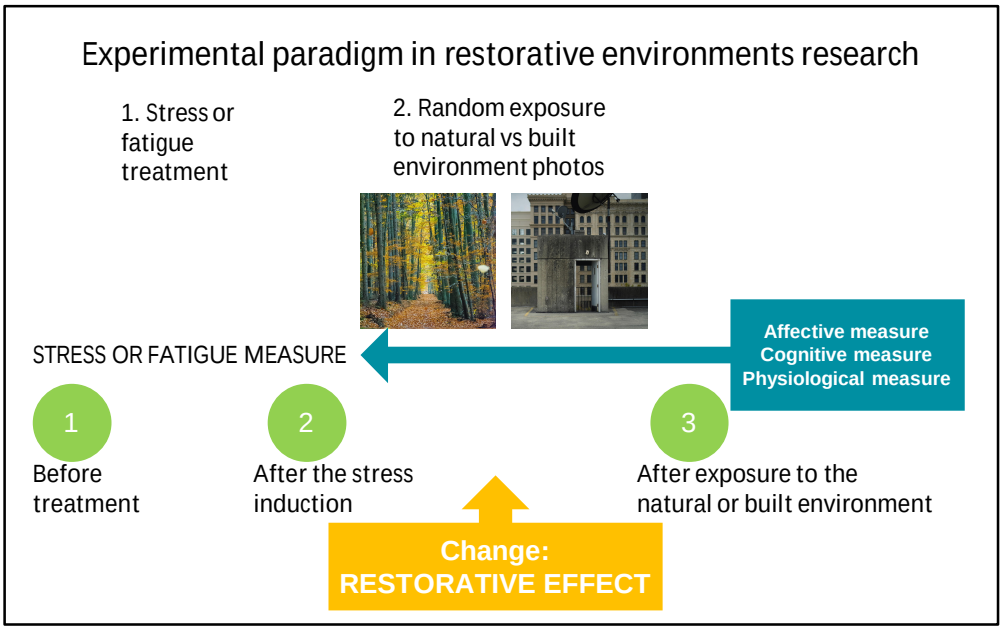
An operationalization of Attention Restoration Theory:

Perceived restorativeness scale (PRS) (Hartig, Korpela, Evans & Gärling, 1996, 1997)

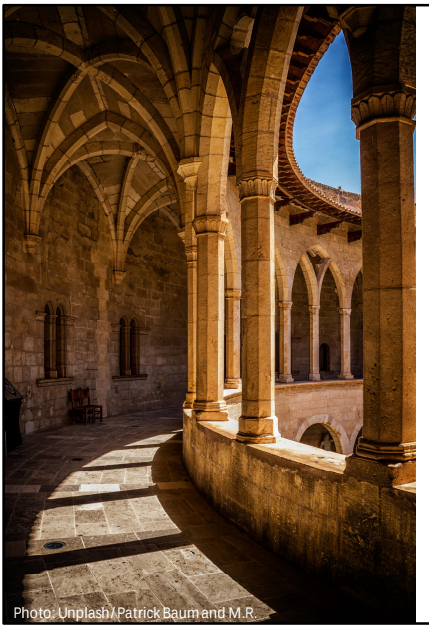
Examples of survey items

FACHINATION	COHERENCE
• My attention is drawn to many interesting things • In places like this it is hard to be bored	• In places like this it is easy to see how things are organized • There is too much going on
BEING AWAY	**COMPATIBILITY**
• Spending time here gives me a break from my day-to-day routine • Places like that are a refuge from nuisance	• I have a sense that I belong here • Being here suits my personality.

In the table there are a few examples of statements of the Perceived restorativeness scale that has widely been used to measure perceived restorative potential of various environments. There is a shorter (11 items) and a longer (26 items) versions of the scale available.



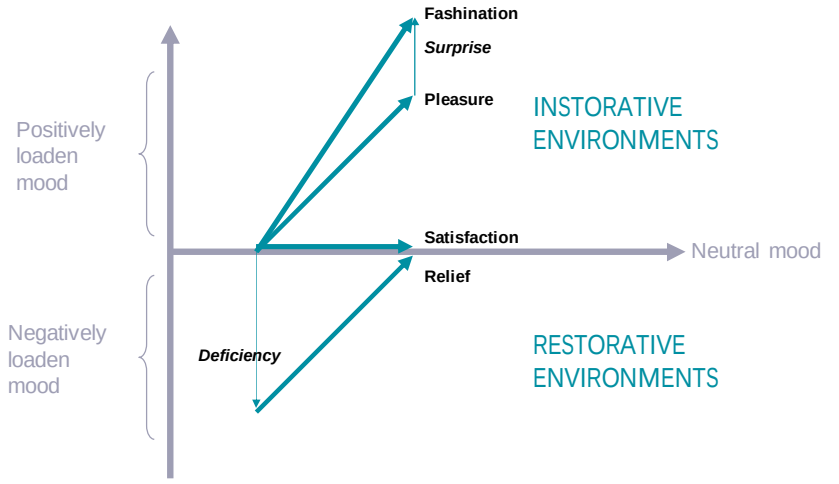
Restorative effects of natural and urban environments are often also studied in an experimental paradigm. In this paradigm, healthy volunteers first receive a stress or fatigue induction treatment (e.g. watching a scary movie). Next, they are randomly exposed to real or simulated natural versus built environments. Stress is measured at (at least) three points in time: at the start of the experiment (Time 1), after the stress-induction (Time 2), and after exposure to the natural or built environment (Time 3). Changes from Time 2 to Time 3 indicate the restorative effect of the environment.
These experiments consistently demonstrate that stressed individuals who are exposed to scenes dominated by natural content have more positive mood changes, perform better on attention tasks and recover from stress more easily than individuals who are exposed to scenes dominated by built content.



Can also built environment settings be restorative?

Although the research on restorative environments has heavily focused on the study of natural settings, there are a few studies about the ability of built environment to also provide stress restoration. Here settings like museums and historical settings have shown to have qualities that also help mental restoration. Three are also many recommendations for the design of indoor settings, e.g. the increased use of natural materials. The research evidence is however still rather weak concerning the restorative indoor settings.

How about instorative environments?



Finally: Research on restorative environments is focusing on the study of the ways negatively loaden mood, like stress, can be restored with the help of restorative settings to reach neutral mood. We can also ask whether certain environments would have a capacity to raise our mood level above the neutral level towards more positive levels? This kind of process might be called instoration. Perhaps urban settings are able to provide these kinds of experiences: not only pleasurable places but also places that are novel, challenging and surprising. Future research hopefully paves ways to the study of these kinds of characteristics of urban environments.