

A Note from Taiwan: Healthy Landscape, Healthy People

Professor Chang Chun-Yen
Department of Horticulture and Landscape Architecture
National Taiwan University

The number of people seeking nature-based recreation opportunities and green-related lifestyles is increasing in Taiwan, as it is throughout the world. Evidence from various experiments, surveys, and literature shows that natural environments are important not just for wild life but also for human health and wellbeing. After more than 15 years of studying how natural landscape provides ecological services in terms of its configuration and composition, my group and I have worked together on ways of realizing beneficial encounters with natural landscapes and now have an interest in proposing a Healthy Landscape Healthy People conceptual framework. A healthy landscape plays a vital role in terms of preserving native wildlife, promoting human health, and as in our case recently, providing a better Qi setting and perception. The following are brief introductions of our working patches within the framework.

In terms of preserving native wildlife, studies of landscape ecology define a healthy landscape from the aspect of the level of naturalness, which is measured by landscape ecological metrics. Landscape ecological metrics provide an objective way to define physical environment and allow attributes of a landscape to be analyzed. So, the relationship between a physical environment and the level of the health of its

wildlife can be found. Besides, our group has not just emphasized this relationship but also demonstrated various landscape scales that sensitively reflect different native species, particularly but not only in the context of rural Taiwan.

More than being essential for preserving wildlife, a healthy landscape also has a profoundly positive effect on the public's health and wellbeing. Although still in its relatively early stages, there is already a large body of research demonstrating that access to a healthy landscape, such as well-configured green space, is a fundamental resource in terms of enhancing psychological wellbeing, reducing stress, promoting healing outcomes, improving cognitive capacity, and building place identity. We have been trying to pull together related theories, such as stress reduction theory and Attention Restoration Theory, to support related studies, which were operated particularly in nature-based recreation areas, leisure rural areas, or work places. With both qualitative and quantitative analysis, we have tried to identify the effective factors of the natural landscape on health experience. Along with psychological measurements, we also emphasized psychophysiological indices. Using biofeedback instrument, we collected multiple psychophysiological reactions while exposing participants to landscape stimuli. The results showed a similar direction as in the literature. Furthermore, we compared the positive effect of activities, the composition of plants in an office, and restorative experience in rural leisure areas. All of these works were pulled together to provide support for the beneficial effects of green or natural environment on public health, particularly for those who face daily pressure in an urban context.

To narrow the gap between a physically healthy landscape and human health, we have recently been working on Qi-related theories and experiments. In traditional Chinese culture, Qi is an active element that exists as part of any living being. Qi is frequently described as the flow of energy that surrounds a creature or element of the environment. Traditional Chinese philosophy states that humans can absorb Qi energy from their surroundings and, in doing so, they get “in tune” with the environment. Allowing Qi to permeate one’s body is seen as essential to health and well-being. Recently, the relationship between Qi and human health has received considerable attention. Many studies have examined the outcomes of Qi exercise, but relatively few have paid attention to physical environmental conditions or how environmental precursors affect positive Qi. For the millions of practitioners of Qi, this is an important gap in the literature that limits the capacity of practitioners to boost positive energy of Qi in their surroundings and thereby increasing the health impacts of their Qi practice. By developing a reliable measurement to describe environmental Qi, our group conducted studies to explore an environment’s Qi field and Qi experience. For now, the result demonstrates that landscape structure and visual quality matter to Qi perception and, furthermore, settings with good a Qi field also tend to possess more natural elements and consider artificial constructions as disturbances.

To the conclusion, it is clear from the brief description above that a healthy landscape is not just essential for wildlife but also for human health. Being isolated from nature has become a common lifestyle in modern society, and people suffer

from stress-related chronic disease more seriously each decade. To draw an overview of this problem, we tried to construct a Healthy Landscape Healthy People conceptual framework. While structuring this framework, we realized that many scientific gaps still need to be filled. From our perspective, a Qi-related study is one of many novel ways that is worth trying, though it is obviously not the only way. For example, to identify more specifically the effects of a landscape on perception, fMRI experiments have shed some light on brain mechanisms in recent years. fMRI experiments could be a powerful way to demonstrate relationships between healthy landscape and people, and an increasingly amount of researchers have adopted this new technique of inquiry. The growing body of related studies has now revealed the great value of natural/green environment in improving and facilitating a holistic and a sustainable life; however, there is still much more creative and practicable effort needed in this inter-disciplinary area to provide more substantial and solid scientific evidence. In our view, our conceptual framework might be helpful to pull these efforts together.