Tree as Architecture —Potential for Activities under Trees with Covid 19th—

Ch. Yoshiharu TSUKAMOTO (Prof., Tokyo Institute of Technology, Dr. Eng.)
 Mem. Momoyo KAIJIMA (Prof., E.T.H.Z of Architectural Behaviorology)
 Mem. Yukako MASUI (Graduate School, Tokyo Institute of Technology, M.Eng.)

[SYNOPSIS]

Following the Covid 19 pandemic, there was a shift towards using outdoor spaces in crowded cities. Spending time under trees not only offers individuals a comfortable environment in the summer where they can relax, but also provides a sacred context where people can practice their religious beliefs such as cherishing trees. One example the Budda attained enlightenment under the Ficus Religiosa. Therefore, trees are not only considered a place where people gather but are also considered a social symbol. On one hand, Japanese cities have experienced a considerable change due to the destruction caused by natural disasters and WWII, and even after reconstruction, the renewal of the urban environment has continued because of the economic growth. Therefore, there are few large trees and settings resulting in less behaviors under trees in Japan. On the other hand, in other Asian cities, large trees with settings like platforms and a small shrine exist, creating a relationship between people and trees. This research studies people's behaviors under trees as the overlap between the environment of trees and the environment of people and calls it 'Tree as Architecture'. The aim of study is to clarify the aspects of tree as architecture by gathering examples through field survey in Asian cities and analyzing the combination of location, tree-species, tree-shape, heat-light-wind environment, people's behavior, and settings. The selected locations are downtown, plaza, waterfront, water sanctuary, and fields. The tree-shapes are classified into 5 categories: Horizontal spreading waving circle or Upper spreading waving circle, such as Ficus Microcarpa; Horizontal spreading circle, such as Morus Alba; Upper spreading circle, such as, Azadirachta Indica; Spindle and circle, such as Jacaranda Mimosifolia. The heat-light-air environment is compared based on the average temperature difference between shade and sunlight and the average ground surface temperature difference. Also, the observer's experience is focused on heat, light, and windPeople's behaviors are classified as expressing faith, doing business, gathering with friends, and relaxing. The settings are classified as religious objects, platforms, pavilions, stalls, parasols, hammocks, and table sets.