

Research Trends and Results

Initiative to Enhance the Quality of Public Open Spaces

SHINGAI Hiroyasu, Head
YOSHIDA Jundo, Senior Researcher
Urban Facilities Division, Urban Planning Department

(Keywords) City center, pedestrians, attraction of pedestrians, public open space, experiment

1. Foreword

In order to ensure that a greater number of people utilize a public open space in the city center as a place for relaxation or interaction, NILIM has undertaken a study of enhancing the quality of public open spaces. As part of the study, we conducted an experiment to clarify how the arrangement of street furniture, for example big trees and benches, in a public open space in the city center affects the behavior of pedestrians. In this paper, we would like to introduce the contents of our experiment.

2. Outline of Experiment

The experiment was conducted at the Toyama Grand Plaza (indoor open space) for five weekdays (six hours per day). The arrangement of trees, chairs, tables, and benches, among other things, was changed on each day of the experiment period, and the behavior of pedestrians was recorded daily. The recording methods used are (1) tracing method (in which an investigator observes pedestrians and records the trajectory of pedestrian movement), (2) static log method (to monitor the behavior of pedestrians when they stay around in a certain area in the open space), and (3) gate count method (to survey the pedestrian traffic volume at the entrance and exit of the open space). The data obtained are shown in the figure so as to enable readers to visually understand the flow of pedestrians and their behavior when using the open space.



Photo. Scene of Experiment

3. Results of Experiment

During the experiment, (1) when a sense of enclosure was created, for example by arranging plants or setting up a restaurant, coffee shop, or café, in a certain area of the open space where pedestrians were predicted to stop and stay around for a while, indeed many pedestrians stopped and stayed there for some time, and (2) by changing the arrangement of seats and plants, the distribution of pedestrian movement changed more drastically than expected, resulting in fewer pedestrians walking through

without stopping. As a result of the experiment, it has been found that the arrangement of space and furniture can greatly affect how the space is used.

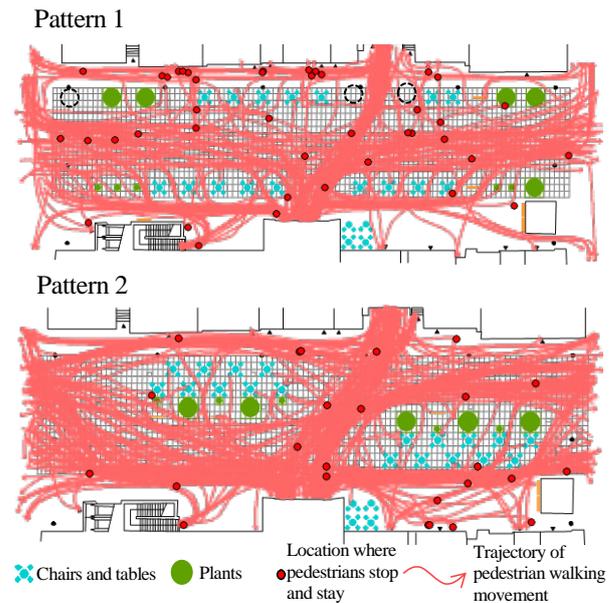


Figure. Examples of Arrangement Patterns and Pedestrian Walking Dynamics

4. Next Steps

Based on the data obtained during this study, we would like to analyze how the layout of public open spaces affects their quality (for example, the attraction of pedestrians or the formation of community) by studying the detailed behavior of pedestrians while they use a certain area (for example by surveying the number of conversation topics, and what they eat there).

In addition, we are planning to publish a manual that, by helping to classify public open spaces by the attributes of users and the conditions of connection to surrounding facilities, supports the development of measures to promote public open space activities that are suitable for each location and the creation of public open spaces that best fit in with the surrounding environment..

[Related Material] Manual on Measures to Attract More Pedestrians “*Hakken* (Discovery)”
<http://www.nilim.go.jp/lab/jcg/index.files/nigiwai.pdf>