Japan Geoscience Union Meeting 2015
(May 24th - 28th at Makuhari, Chiba, Japan)

HGG01-01 Room:101B Time:May 28 09:00-09:15

The impression of the coastal landscape with or without wind farm by the inhabitants of the coastal area and its factors

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Recently wind power generation in particular is receiving a lot of attention in renewable energy. The coastal area of Hokkaido prefecture were known as suitable site for wind farm construction because of highly potential of good wind condition. Although negative effects were often pointed out by inhabitants of wind farms, there were no guidelines to protect scenic value of coastal area except national park area. The purpose of this study is to identify the impact of wind farms on coastal landscape evaluation and to identify the factors which affect the impression of coastal landscape.

Four study sites where have same component of generation but different relation were selected for this survey in Hokkaido, Japan. The questionnaire survey was conducted in Honcho-Area and Utasutsu-Area in Suttsu-Town which has 11 windmills as symbol of town, Teine-Ward, Sapporo-City, in which will be built new wind farm on nearby coastal area and Ishikari-City which has 3 citizen windmills. The questionaire includes ”the impression evaluation of the photographs with/without the wind farm”, ”the attitude toward the wind farm”, and ”the respondents attributes.”

In all survey sites, as a result, the score of impression evaluation tended to be low as the wind farm in photograph is getting bigger. About the question of the way of thinking, Suttsu tended to have acceptable attitude toward wind farm, Teine tended to have unacceptable attitude toward wind farm and Ishikari and Utasutsu had the middle attitude between Suttsu and Teine. On identifying the factor that affects the impression evaluation using this score for a factor analysis, we got two factors ”the impact on human health and ecosystem” and ”the benefit of wind farm.” Furthermore, we classified respondents in four clusters using the score of factor analysis. The group which has acceptable attitude toward wind farm evaluated the photographs with wind farm more highly than without wind farm. The group which has unacceptable attitude toward wind farm evaluated photographs with wind farm low.

This study showed that the impression evaluation was influenced not only by scenic aspects, visible or invisible, but also by the attitude toward wind power generation. In conclusion, considering that such difference in the attitude can influence the impression evaluation on the landscape aspect, it is important to explain to inhabitants in detail and to discuss after construction when we build a new wind power plant.

Keywords: wind farm, coastal landscape, attributes, impression evaluation, inhabitants, renewable energy

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(May 24th - 28th at Makuhari, Chiba, Japan)

HGG01-02 Room:101B Time:May 28 09:15-09:30

Study of Correlation between the Existences of Landscape Elements to People Preference of Landscape Quality

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1.Introduction

The existence of landscape elements is very important to be considered as decision makers in each landscape planning and managements because it influences the people perceptions for its landscape quality. The objective of this study is identifying the people preferences of landscape quality from the existence of elements inside. The objective of this study is investigating the influence of existence of landscape elements to people preference of landscape quality.

2.Study Method

The study was conducted by using online-descriptive method with respondents group, which consisted of students and alumni of Landscape Architecture Department of Bogor Agricultural University Indonesia. This respondent group was selected because they already had studied about landscape. The investigated objects are landscape images that had been already investigated in previous research and had high value of preference and exotics in Pratiwi, et al (2014). The selected landscape images were modified and erased its several landscape elements. The software used to modify landscape images is GIMP software. There are 6 pairs of Original and fake images, with total images are 13 (picture number 2 was modified twice and it has 2 fake images). Those images were put on an online questionnaire with the random order between Original and fake images. Each uploaded images were followed by descriptive questions, those were dislike-prefer, usual-exotic, monotonous-various, no focal point-strong focal point, common-magnificent, bad-good composition, plain-colorful, dark-bight, and ordinary-beautiful. Beside the descriptive questions, there were also questions about what landscape elements were preferred the most in the image by using the online hotspot image tool.

3. Results and Consideration

The number of respondents is 130 people; consist of 57 students and 73 alumni of Landscape Architecture Department Bogor Agricultural University. The number of male respondents is 56 and female respondents are 74 People. All of them already have basic knowledge of landscape from the subject Fundamentals of Landscape Architecture while they study in Bogor Agricultural University.

The result shows that respondents have different preference between Original and fake images in 3 paired images, those are picture number 2 (Original) and 7 and 10 (fake), picture number 4 (Original) and 8 (fake), and picture number 12 (Original) and 5 (fake). The picture number 2, 7 and 10 are picture of a Fuji-Hakone-Izu National Park, Kanagawa Prefecture with Mt. Fuji as a background (Figure 1). In the Original picture (pic 2), the very prefer answer is 50% and prefer is 46.15%. The dislike answer is 3.08% and very dislike 0.77%. The hotspot click detector shows that Mt. Fuji is the most clicked by respondents. In the picture number 7, where Mt. Fuji was erased, the number of very prefer answer decreased to 33.08% but the prefer answer increased to 58.46%. The dislike answer is increased to 7.69% but the very dislike still 0.77%. In this picture, the hotspot detector shows most respondents clicked on Red Shrine Gate on the lakeside. In the picture number 10, the Mt. Fuji was emerged but the Red Shrine was erased. The very prefer answer increased to 55.38% but the prefer answer decreased to 41.54%. The number of dislike answer decreased to 2.31% and the very dislike answer still 0.77%. The hotspot detector shows that the most respondents clicked on Mt. Fuji again.

4. Conclusion

The existence of landscape elements is very important in a landscape. For example in Fuji-Hakone-Izu National Park, the existence of Mount Fuji as background view can emerge high value of people's preference of total landscape. The view to Mount Fuji is important for visitors and affects people perceptions the Fuji-Hakone-Izu National Park.

Keywords: Preference, Landscape, landscape element, Landscape Quality

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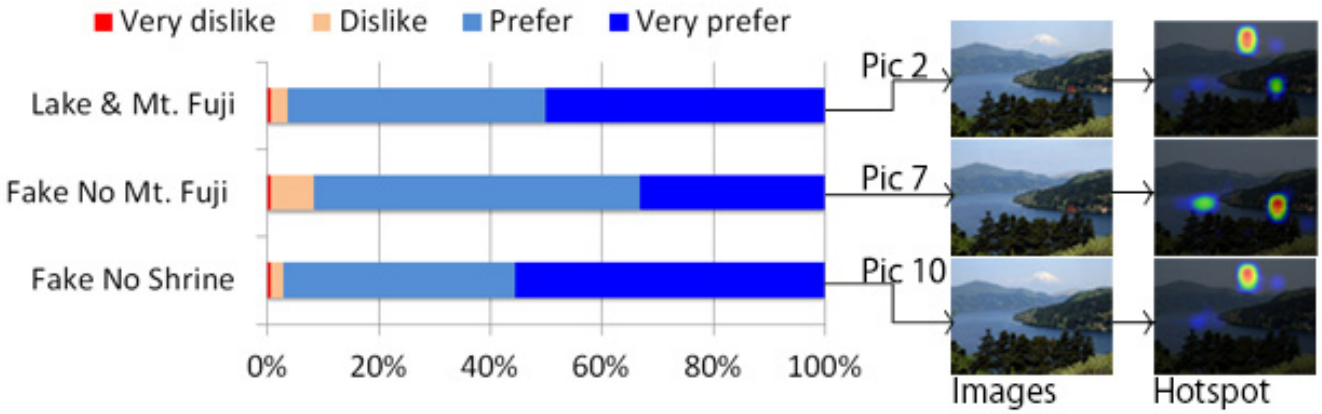

Figure 1. Respondents Preference of Real & Fake Pictures of Lake & Mount Fuji

Japan Geoscience Union Meeting 2015
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HGG01-03 Room:101B Time:May 28 09:30-09:45

Impression by Spatial Structure At Indonesia's Traditional Open Space Alun-Alun — University Students As Study Subject

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1.Introduction

The population of Indonesia is 4^{th} in the world ranking, and rapid economic growth has been observed based on this large population. Expansion of the city areas is progressing, especially around its capital Jakarta. The current issue is to develop and establish open space. In this study, alun-alun, which is Indonesia's traditional open space, has been set as a study subject. Alun-alun is a space where nothing other than lawns and several trees exist in a vast area. In recent years, with a government initiative, alun-alun have been converted to city gardens. A city garden can be defined as an open space where flowers and trees are planted. In this study, the objective has been set to compare people's impressions on alun-alun, between traditional ones and the ones which spatial structure has been changed.

2.Study Methods

In this study, impressions on alun-alun were surveyed with Bogor Agricultural University students. This university is located in the west Java in Indonesia. The survey employed a 7-scale evaluation with the following 15 questions: 1) not familiar to familiar, 2) manmade to natural, 3) dislike to like, 4) not beautiful to beautiful, 5) boring to fun, 6) tranquil to active, 7) Western to Indonesian, 8) uncomfortable to comfortable, 9) understated to flashy, 10) less green to more green, 11) modern to traditional, 12) ordinary to unique, 13) dirty to clean, 14) restricted to free, and 15) simple to complicated. The scale of seven levels was presented with the following expressions: *very much*, *quite*, *a little*, *neither*, *a little*, *quite*, and *very much*. In this article, the percentage of the top three boxes, the total respondents of *very much*, *quite* and *a little*, is indicated. The survey was conducted in May 2013, and 357 responses were obtained. The Steel-Dwass test was used for the analysis.

With this test, the following three pairings with the 15 questions were conducted: Type 1 and Type 2, Type 1 and Type 3, and Type 1 and Type 4. In this study, alun-alun were categorized into four types based on the spatial structure: Type 1 includes traditional ones, Type 2 is with the ones with planters, Type 3 is the ones in a theme park style, and Type 4 includes western style parks. All Types 2, 3 and 4 are the ones that evolved its spatial structure from Type 1.

3.Results and considerations

Type 1 was identified as a *1) familiar* (90.5%), *3) like* (87.4%), *2) natural* (85.7%), *7) Indonesian* (85.2%), *11) traditional* (83.5%), *4) beautiful* (82.9%), *14) free* (82.9%), *8) comfortable* (82.4%) and *10) more green* (81.8) space. As a result of the Steel-Dwass test, 41 pairings among the total 45 parings exhibited a statistically significant difference ($p<.01$). The items which did not show a statistically significant difference were *6) tranquil to active*, *12) ordinary to unique* and *13) dirty to clean* between Type 1 and Type 2. The item 4) not beautiful to beautiful also did not show a statistically significant difference between Type 1 and Type 4. From this result, students possess different impressions about traditional Type 1 than others which spatial structure has changed.

With the question *10) less green to more green*, the results towards *more green* showed as follows: 81.8% with Type 1, 48.5% with Type 2, 30.3% with Type 3, and 48.5% with Type 4. This result concludes that students feel that the traditional Type 1 has more green space than others which spatial structures have changed.

4.Conclusion

Bogor Agricultural University students felt Type 1 alun-alun as a space which is natural, beautiful, familiar and comfortable. They liked this type as an Indonesia's traditional space. They seem to find traditional alun-alun, which features only lawns and several trees in a vast area, greener than city gardens with planted flowers and trees.

Keywords: Indonesia, Traditional Open Space, Alun-Alun, University students

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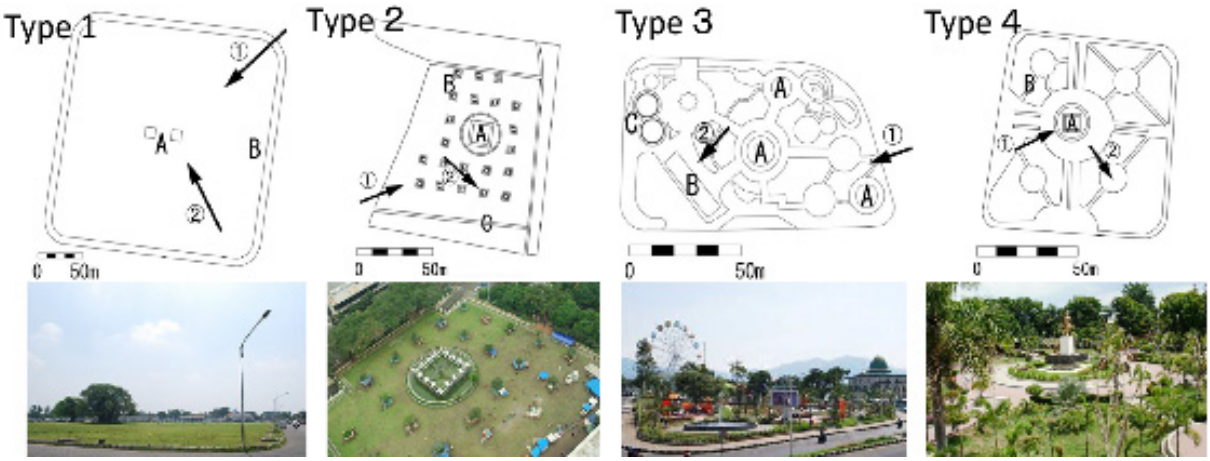

Japan Geoscience Union Meeting 2015
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HGG01-04 Room:101B Time:May 28 09:45-10:00

The Effect of Slight Thinning of Managed Coniferous Forest on Landscape Appreciation and Psychological Restoration

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We investigated the influence of slight thinning (number of woods: 16.6%, basal area: 9.3%) on landscape appreciation and on psychological restorative effect in an on-site setting by exposing respondents for a particular period to an ordinarily managed coniferous woodland (Japanese larch and Japanese red pine in a second-growth forest).

The experiments were conducted in an experimental plot (0.25 ha; 50 m x 50 m) in the coniferous woodland in Fuji Iyashinomoroi Woodland Study Center in May (before thinning) and October 2013 (after thinning), with the mean temperature and relative humidity being almost constant during the two experimental periods. The respondents were the same fifteen individuals (eleven males, four female; aged twenties to forties) for the two experiments.

The respondents were individually exposed to the control setting (enclosed session), which was enclosed by a large tarp in a large tent, and the experimental setting (opened session), which was opened without the tarp in the same tent, at random for 15 min. In both the sessions, the respondents were required to answer three questionnaires to investigate the psychological restorative effect before and only after the experiment (feeling; POMS, affect; PANAS, subjective restorativeness; ROS). For landscape appreciation, the respondents were required to answer other two questionnaires after the experiment (scene appreciation (SD) restorative property of environment (PRS)).

As a result of the analysis, there was a statistical difference in subjective restoartiveness before and after thinning ($p < .05$), however, not for the other parameters such as feeling and affect before and after thinning in the psychological restorative effect. For the parameter of landscape appreciation, there was no statistical difference in scene appreciation and the restorative property of the environment, except for some indices (thermal sensation ($p < .01$) and brightness ($p < .05$)).

Thus, to add to our current knowledge of psyops theory, when a planner wants to control the user's landscape appreciation and/or psychological restorative effect in the ordinarily managed coniferous woodland such as focused on this research, it is suggested that stronger thinning would be necessary. On the other hand, as the meaningful knowledge, although there is a possibility that scene appreciation, which was relatively warm and bright before thinning, would influence the score of the psychological restorative effect, if the week thinning is conducted, the psychological effect is not always enhanced; in contrast, it might decrease the subjective restorativeness of the user.

Lastly, this study provides new information about relationship of thinning with forest management and the possibility of it demonstrating health rest functions such as forest recreation and forest bathing.

Keywords: Landscape appreciation, Psychological restoration, Thinning, Forest management, Forest bathing, Recreational use

Japan Geoscience Union Meeting 2015
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HGG01-05 Room:101B Time:May 28 10:00-10:15

Study of People Perceptions about Four Parks in Jakarta

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[1]Bogor Agricultural University, [2]Graduate School of Horticulture, Chiba University

1.Introduction

City parks are important spaces for people amenities and conserving biodiversity. People are main user of city parks who has different perception and preferences about parks. Each parks has different characteristics that composed by its elements. In this research, the correlation between composition of landscape elements and people's perceptions about the parks was investigated. The purpose of this research is investigating people's perceptions and preferences of the visual landscape in some city parks in Central of Jakarta.

2.Study Method

The study was conducted from January to February 2015. The study sites were located in Menteng Park, Kodok Park, Suropati Park, and Situ Lembang Park, Central Jakarta. The fourth park was chosen because they close to residential area. Method of data collection was done by field observation. And people perceptions were obtained by using online questionnaire. The data were analyzed by using Chi-square method.

3.Results and Consideration

The number of respondents 87 people, consisting of 46 male and 41 female. The number of teenagers is 18 and adult is 69 people. Chi-squre test results showed that age is significantly influences to level of preference of Situ Lembang Park. The result shows that adult respondents prefer to park that has water features. The Suropati Park has highest value of preference, beauty and well element composition compared with other parks (Figure 1). The hotspot image detector indicates that the preferred landscape element in Situ Lembang Park is a water fountain (20% respondents). That is similar with Menteng Park that the most preferred element is a water fountain (19% respondents). In Kodok Park, the most preferred element is a plaza (33,3% respondents). But in Suropati Park, it is a row of trees (19% respondents) (Figure 1).

4.Conclusion

The park that has the most value of preference, beauty and well composition of elements is Suropati Park. The most preferred landscape element among four parks is water feature. Although Suropati Park is the most preferred park, people do not prefer to water feature, but more prefer to composition of row trees.

Keywords: Park, Preference, Perceptions, Visual Landscape, Landscape Elements

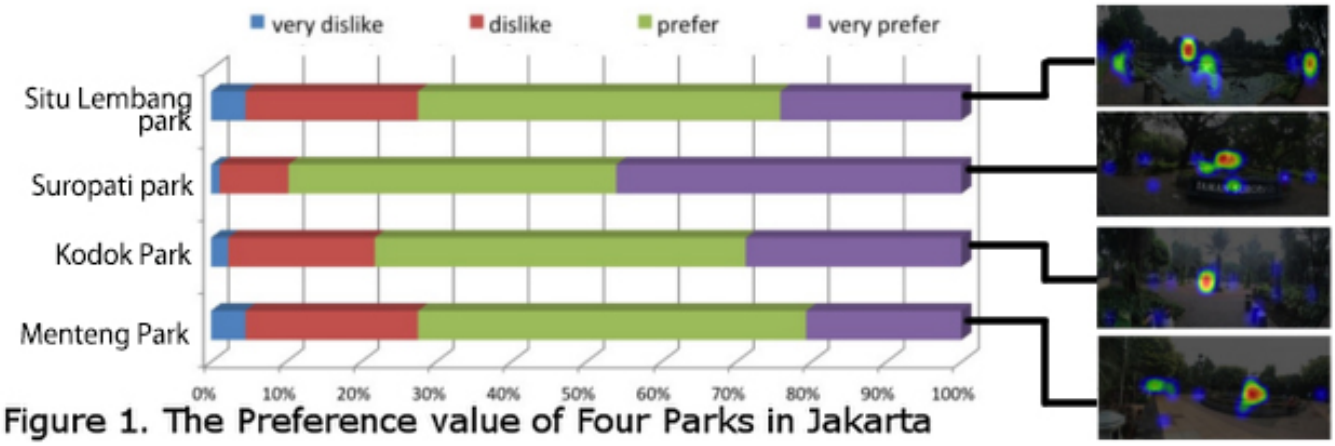

Figure 1. The Preference value of Four Parks in Jakarta

Japan Geoscience Union Meeting 2015
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HGG01-06 Room:101B Time:May 28 10:15-10:30

Survey about Bogor Agricultural University Students' Opinions of Green Space Conservation Activities

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[1]Graduate School of Horticulture, Chiba University, [2]Graduate School of Bogor Agricultural University

1. Introduction

Most of green open spaces in Jakarta are easy to be changed into other land use. In fact, green open spaces in Jakarta have changed rapidly in recent years. It is necessary to increase protected area in the future. The objective of this study was to define students' attitude toward green space conservation activities and students' participation opinions. A survey was conducted with university students in Bogor Agricultural University (n=614).

2. Study Methods

A survey was conducted from September until October, 2014, using questionnaire tested to 614 university students of Bogor Agricultural University. The following four items were surveyed: 1) students' attributes (gender, undergraduate or graduate, participation experience in green space conservation activities, and willingness to participate), 2) impression of green space conservation activities, 3) green space conservation activities that have been participated, and 4) desirable green space conservation activities.

3. Results and Considerations

1) Regarding respondents' attributes

The number of valid responses was 614, with 251 male students (41%) and 354 female students (58%). The number of undergraduate students was 495 students (81%). The number of them who are studying in graduate school was 119 students (19%). The number of students who had participation experience in green space conservation activities was 406 students (66%). While, the number of students who didn't have participation experience in green space conservation activities was 205 students (33%). The number of students who are willing to participate in those activities was 548 students (89%), whereas, the number of them who are not willing to participate in those activities was 61 students (10%).

2) Opinion about green space conservation activities (The number of valid responses was 614)

Survey about opinion of green space conservation activities were divided into four levels, *strongly agree*, *agree*, *disagree*, and *strongly disagree*. More than 95% respondents thought *seem to produce a chance to find about nature newly* (98.4%), *plants seem to make you feel better* (96.9%), *seem to be good exercise* (96.7%), and *seem to make friends and meet various people* (96.2%). Moreover, many respondents also thought *seem to be few attractive activities that promote your participation* (97.9%). The percentage of students who thought *have doubt that activities can conserve natural environment* was 20.6%. The percentage of students who thought *can't understand how to find information and can't find information that you need* was 49.7%. More than 80% students thought *seem to be early in the morning* and *seem to high cost to join*. Among the 810 answers (plural answer) of survey about activities that had been participated and desirable activities, the activities organized by student organization of university was 142 answers. While the activities organized by school was 269 answers, such as picking up garbage in the park and cleaning work. Among the 810 answers, 235 answers were activities whose the information was found by themselves.

4. Conclusion

The students of Bogor Agricultural University who have interest in participation of green space conservation activities are 548 students (89%). While students who have participation experience are 406 students (66%). Students took positive attitude toward green space conservation activities and recognized the advantage of those. However, students also indicated that there are very few activities that have attraction and it is difficult to get information. Therefore, it is important to establish surrounding environment which encourage students to participate green space conservation activity easily by providing information about activities which is agreed by students through desirable activities and activities that had been participated.

Keywords: green space conservation activities, Bogor Agricultural University, questionnaire survey

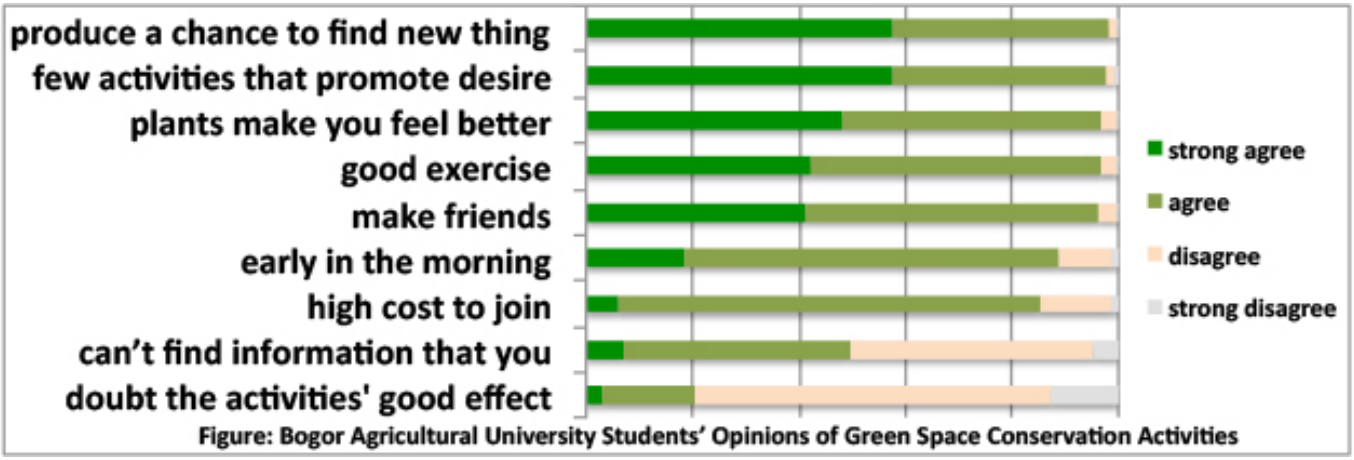

Figure: Bogor Agricultural University Students' Opinions of Green Space Conservation Activities

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Remembering vacant lots: how residents used informal urban greenspace as children and teenagers in Japan and Australia

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[1]Environmental Futures Research Institute, Griffith University, [2]The Kadoorie Institute, University of Hong Kong

Contact with nature is vital for the development of children and teenagers. In urban areas, formal greenspace such as parks should provide opportunities for such contact. But research suggests parks are often failing to satisfy young people's needs, because park space is not always available and activities are restricted. In the past, informal urban greenspaces (IGS) such as vacant lots were used to avoid restrictions in play. However, children and teenagers today seem less free in choosing how and where to spend their time. Moreover, outdoor play time is declining. To make sure young people today can also enjoy the social, mental, emotional and physical health benefits of IGS, we need to understand better how previous generations used it.

Our study quantitatively compared how adult residents remembered using IGS in their childhood and teen age years in two geographically and culturally distinct cities: Brisbane, Australia and Sapporo, Japan. Questions we asked included: What kind of activities did you use IGS for as a child or teenager? Why did you use IGS and not a park or garden? Did you experience any problems using IGS? We also analyzed how IGS use, reasons and problems differed between genders and the two survey locations.

The results showed most respondents (>70%) remembered using IGS in the past, and preferred it over other greenspace because it was easily accessible. Most (>70%) recalled experiencing no problems (e.g. danger of injury) when using IGS. These results are in contrast with recently increasing parental concern for children's safety. Such trends may limit present IGS use and prevent it from fulfilling the important role it played for previous generations' recreation.

Keywords: city nature, childhood, unstructured play, wildscapes, international comparison, wilderness

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HGG01-08 Room:101B Time:May 28 11:00-11:30

Understanding values in landscape evaluation: a geographic perspective

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Much has been written about how the values people hold affect their environmental perception, especially in the field of social psychology. Although the concept of landscape has played a central role in geography for over a century, studies about the values people hold and how they affect perception of, and attitudes towards, landscapes are surprisingly scarce. This paper discusses the role of values, attitudes and perception in shaping how people use urban national parks in the United States and Australia. The paper examines how geographic insights into values and landscape evaluation can help scholars to better understand how and why people use urban green spaces like national parks. Theoretical models are explored and results from empirical research are used to appraise the utility of these models for future research.

Keywords: landscape, urban, geography, values, parks, green space

Japan Geoscience Union Meeting 2015
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HGG01-09 Room:101B Time:May 28 11:30-12:00

Reevaluating spaces and locations of everyday urban life in Tokyo as environments of memory, nostalgia and emotions

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In recent years low-rise tenement neighborhoods such as Tsukudajima, Yanaka, Nezu, Sendagi, Asakusa and other areas are being reevaluated as locations where one can still explore Tokyo s historic urban fabric. They have been elevated as genius loci of Tokyo, i.e. unique places possessing an auratic atmosphere, which is regarded as an expression of the essential spirit of the city. Irrespective of their diverse local histories, these areas are considered as embodiments of the history of modern Tokyo, in particular of past forms of urban living and culture. However, the more such urban fabric is disappearing due to the impact of modernization and globalization, the more they are filled with emotions of nostalgia. These diverse processes and the tensions that come along with them are reflected in the visual and literary representations of Tokyo. Very often feelings of disconnection from the past are combined with a longing for spaces and places that maintain a sense of continuity with the past. The focus is often on unspectacular, small-scale areas of everyday life in Tokyo and the transformations ? from modernization to erasure ? inscribed in these places. To explore such tensions, I will examine recent examples of what I call *spatial (auto)biographies*, including Fukuda Kazuya s *Tokyo style* (2008), Ishizeki Zenjiro s *Yoshimoto Takaaki Tokyo* (2005) and Kobayashi Nobuhiko s *My map of Tokyo* (2013). These works are centered on the intense interplay between an individual s life in Tokyo and memories that incorporate appropriations of the built environment and representations of history. Through inscribing an individual s life into the city historical, cultural and topographical layers of Tokyo can be unveiled. Refracted by memory, feelings of nostalgia and melancholy, the (auto)biographies shed light on each author s own place in the history of Tokyo.

Keywords: Tokyo, neighbourhoods, spatial autobiography, emotions, nostalgia

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HGG01-10 Room:101B Time:May 28 12:00-12:15

Description of Sceneries in Chinese Poetries Written by Soseki Natsume

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1. Introduction

Soseki Natsume is a famous literature scholar and well known in East Asia such as in China, Taiwan, and Korea. His Chinese poetries are said to be beautiful even when they are read in Chinese. In this study, the objective was set to examine his views in sceneries by analyzing vocabularies used in his Chinese poetries.

2. Study Methods

Soseki Natsume read the total of 208 Chinese poetries, and those featured in *Soseki Shichu (Poetry Note)* written by Kojiro Yoshikawa in 1967 were selected as a study subject. Vocabularies related to sceneries were mainly collected. In this research, vocabularies in the following categories were counted: Vegetation such as flower and willow tree, living creatures such as bird and horse, weather such as wind and clouds, and nature such as water, mountain and the moon. Only those that appeared twice or more were counted. The percentage indicated in the article shows the appearance rate in the 208 poetries. A cluster analysis (Ward's Method) was performed for this analysis, and SPSS was applied for statistical analysis.

3. Results

3.1 Frequency of appearance of vocabularies related to sceneries

Within the 208 poetries, the following vocabularies were used in order of frequent appearance: Wind (34%), water (31%), clouds (30%), mountain (23%), flower (22%), rain (20%), moon (19%), autumn (17%), willow tree (13%), bird (13%), and sky (13%). The total number of vocabularies appeared summed up to be 923.

Vegetation related vocabularies resulted as following: Flower (22%), willow tree (13%), bamboo (11%), tree (8%), pine tree (8%), coloring autumn leaves (7%), grass (7%), coppice (6%), and moss (5%). The total number of vocabularies related to vegetation was 219 and occupied 24% among all the scenery related vocabularies. As for the vocabularies related to living creatures, the total number was 77 (8%) with the following breakdown: bird (13%), horse (5%), crane (4%), fish (4%). The weather related vocabularies totaled 320 (35%) with wind (34%), clouds (30%), rain (20%), autumn (17%), spring (12%), sunset (11%), sun (8%), and smoke (8%). Lastly, the vocabularies related to nature appeared as follows: water (31%), mountain (23%), moon (19%), and sky (13%); and the total appearance counted 307 vocabularies (33%).

3.2 Cluster analysis on scenery related vocabularies

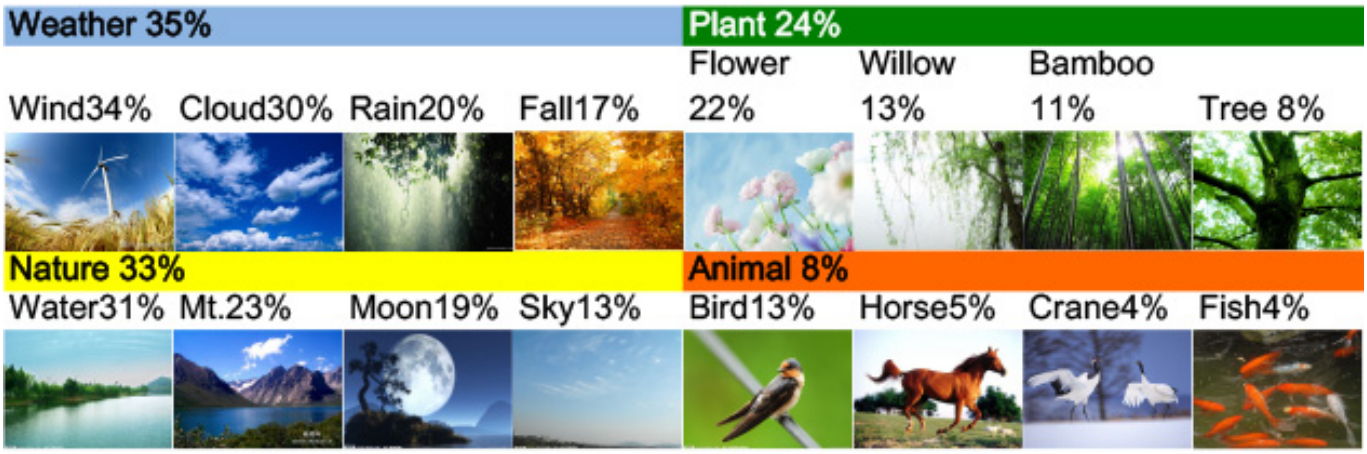
As a result of a cluster analysis of this collected data, we could divide the vocabularies into two groups: the 1st to the 11th and the 12th and below in ranking of frequency of appearance. Within the 1st to the 11th in ranking, two clusters were identified: One with water, mountain, and clouds; and another with wind, flower, rain, moon, autumn, willow tree, bird, and sky.

4. Considerations

The scenery related vocabularies, which appear in Chinese poetries read by Soseki Natsume, were analyzed. He used vocabularies in categories like weather (35%), nature (33%), and vegetation (24%). In particular, with the cluster that includes water, mountain and clouds, the scenery that can be imagined is where clouds are lying over the mountains in a distance with a water view spread in front. Next, in the cluster of wind, flower, rain, moon, autumn, willow tree, bird and sky, the image can be related to the Japanese four-character phrase *Ka Cho Fu Getsu*, which literally writes *flower, bird, wind, and moon* and expresses the traditional themes of natural beauty in Japan.

Keywords: Chinese poetry, Scenery, Soseki Natsume, Vocabulary

HGG01-10 Room:101B Time:May 28 12:00-12:15



Japan Geoscience Union Meeting 2015
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HGG01-11 Room:101B Time:May 28 12:15-12:45

A Comparison of Camper Psychological Well-being in Taiwan

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The literature on psychological well-being has progressed rapidly in the past few decades. The recent studies have taken huge steps in understanding the factors influencing psychological well-being. However, few studies of this line have focused on the context of campers. Camping is one of the most popular outdoor recreation activities in western countries; however it has not been the case in Taiwan. Understanding the factors such as visitor psychological well-being can help recreation managers tailor the services to meet the needs for their diverse clienteles. The purpose of this study was to explore the differences of psychological well-being among campers who were from different living circles, travel distances, regions and cultural groups in Taiwan.

Psychological well-being served as the dependent variable in this study. Psychological well-being refers to how people evaluate their lives and these evaluations may be in the form of cognition or in the form of affect. The cognitive part is an information based appraisal of one′s life; that is, when a person gives conscious evaluative judgments about one′s satisfaction with life as a whole. The affective part is a hedonic evaluation guided by emotions and feelings such as frequency with which people experience pleasant/unpleasant moods in reaction to their lives. There were four independent variables in this study including living circle, travel distance, region and cultural group. Based on previous cross-cultural research, I hypothesize that campers from different living circles, travel distances, regions and cultural groups have different psychological well-being.

In 2013 and 2014, campers to the Wuling National Forest Recreation Area and Xitou Nature Education Area in Taiwan were surveyed. I intended to include two settings, one considerably remote and the other closer to urban area, to better represent diverse recreation locations. The researchers stayed at the Wuling and Xitou campgrounds and asked if the campers encountered were willing to take a 15-minute survey. Overall, 797 campers were approached and 771 campers responded to the surveys, resulting in a 97% response rate and 701 valid surveys.

In the questionnaire, there were 23 items to measure psychological well-being. Exploratory factor analyses were used to reduce the data and find possible factors from the psychological well-being items. Eventually, 5 factors were identified for the psychological well-being measures. The validity and reliability analysis showed the factors derived possessed acceptable measurement criteria. I asked hikers′ residential zip code and, accordingly, calculated hikers′ living circles, travel distances, and regions. For testing the psychological well-being differences, the results showed that 3 out of 5, 2 out of 5 and 1 out of 5 psychological well-being factors differed with living circles, regions and travel distance, respectively. The cultural group was not significantly different from camper psychological well-being.

The findings have implications for recreation management. Managers may tailor their services to meet the diverse backgrounds of their campers. For instance, this study found that campers who lived closer and travelled shorter distance to the campground had higher levels of psychological well-being. Campers from the northern region of Taiwan however perceived lower levels of psychological well-being. This is especially true for the warm relationship and new experience aspects of psychological well-being. Accordingly, I suggest that managers may provide more campgrounds closer to campers′ residential areas, and provide a setting with welcome, kind, friendly, decent, dedicated, modern, fresh and unique service atmosphere so as to promote the psychological well-being of their clienteles. Discussion and suggestions for future research of this line are also provided.

Keywords: psychological well-being, living circle, travel distance, region, cultural group, camper

Japan Geoscience Union Meeting 2015
(May 24th - 28th at Makuhari, Chiba, Japan)

HGG01-12 Room:101B Time:May 28 14:15-14:45

Landscape Appreciation as a Technology of the Imagination

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”...take chunks of reality and use [them] as raw materials...”
(George Herms, Assemblage Artist)

Rubble, conglomerates, piles of junk. Landscapes of ’stuff’ drive us to continuously ”acknowledg[e] and interpretively organis[e] the mobile density of the material world” (Smith, 2012). This is evidenced by the increasingly diverse range of activities that emerge from a consideration of stuff, including media geology (e.g. Parikka), speculative realism (e.g. Morton, Harman), artistic practice (Smith, 2012, 2013), design anthropology (e.g. Ingold, Braiterman) and alternative childhood education (e.g. Ward) to list a short selection. Viewed in this way the landscape can be considered a particularly fertile social/material means of generating imaginations (a ’technology of the imagination’ - to use the terminology of Sneath et al., 2009).

As an illustration, this paper presents a personal account of how an emergent appreciation of the Tokyo landscape has acted as a technology of the imagination. This initially casual appreciation concurrently coalesced into a focused line of inquiry and splintered off into related projects over five years of piecemeal fieldwork. The landscape appreciation is depicted in a meshwork (e.g. Ingold) terrain of projects with localized swellings (nodes). These include research and related activities in Tokyo (collaborative mapping workshops, walking tours with international research groups, spin-off research projects, media interviews, presentations, invited lectures and publications, and a graduate course at the University of Tokyo) and emergent and increasingly divergent interdisciplinary collaborative art and design projects in Auckland, New Zealand (including participatory public art projects, exhibitions, art education, public space design, and interdisciplinary academic pursuits).

In this context, this paper outlines a ’method of appreciation’ which builds on actor-network theory (e.g. Mol’s (2010), phenomenology (e.g. Merleau-Ponty) and gentleness (e.g. McCann) - aligning itself with a queer or ’wild’ methodological approach which works with resources at hand and considers that ’everything is in everything’ (e.g. Halberstam, Ranciere). This is an artistic research frame that values democracy of experiences and methodological abundance (e.g. Hannula et al., 2014) and attempts to follow ”and rid[e] upon the forces of examples and projects, using their immanent energy or intensity, rather than building impregnable walls around the proposed practice” (von Busch, 2008).

More specifically, this paper presents an emerging model for interdisciplinary work and collaboration where appreciating (or ’caring about’ - Sennett, 1970) one’s environment forms a technology of the imagination (Halse, 2013) that generates footholds (sometimes unexpected and only tangentially related) for the ongoing pleasure of research, work and life. This is a contribution to a view of creativity which is less about innovation (as the production of novel solutions) and more about the ability to improvise with flexibility and foresight (e.g. Gatt and Ingold, 2013) as a way of working.

The paper concludes with a discussion of the implications of the ’method of appreciation’ for academics, professionals, amateurs and the general public and presents a challenge to disciplinary egocentricism.

NOTE: In addition to the presentation, the author also proposes an open off-site (after hours) walking-based workshop for JpGu Meeting participants to explore the generative possibilities of experiencing the landscape together as a diverse and interdisciplinary group of researchers and practitioners.

Keywords: non-intentional landscape, generativity, improvisation, experimental methodology

Japan Geoscience Union Meeting 2015
(May 24th - 28th at Makuhari, Chiba, Japan)

HGG01-13 Room:101B Time:May 28 14:45-15:00

Comparing 3D Animation and 3D Virtual Reality in Landscape Design Presentation

HADI, Akhmad arifin[1*] ; FURUYA, Katsunori[1] ; KHRISRACHMANSYAH, Rezky[2]

[1]Graduate School of Horticulture, Chiba University, [2]Bogor Agricultural University Indonesia

1. Introduction

The 3D digital model is recently widely used in landscape design presentation. In this research, the two types of 3D presentation model are compared; those are 3D animation and 3D Real-time virtual reality model. Those types are compared because people are getting familiar with both 3D models' type, such as in animation movie, television programs, digital games, etc. The objective of this research is obtaining respondents' preferences about the use of 3D presentations in VR and animation for landscape design presentation.

2. Study Method

The respondents are the landscape architecture students of Chiba University and Bogor Agricultural University who have already studied about fundamentals of landscape architecture and are familiar with landscape design presentation. The 3D model is landscape design of North Sunter Reservoir Forest of Jakarta Indonesia. The design was presented in 3D animation and 3D Real-time Virtual Reality (VR) model. The respondents were asked to play the 3D animation and operate the 3D VR in Windows-based computer. Afterwards, the respondents were asked to fulfill the questionnaire. In the questionnaire, there are descriptive questions to investigate respondents' perception about both 3D models.

3. Result and Considerations

There are 140 respondents consists of 57 respondents who are Chiba University students and 83 Respondents who are Bogor Agricultural University students. Both of Japanese and Indonesian students are already familiar with 3D game operation. The result shows that Japanese students more interest to VR Model than Indonesian students ($p<.01$), and the Indonesian students more interest to 3D Animation than Japanese students ($p<.05$) (Figure 1). Indonesian students more prefer to 3D Animation because it is more natural looks than 3D VR Model ($p<.01$). Indonesian students also more understand about the design in 3D animation comparing with 3D VR presentation ($p<.01$). Japanese students more interested in 3D VR presentation because it is easier to operate ($p<.01$). The last question is about the respondents opinion as a young landscape architects and scientists. In relation with the use of landscape design presentation, the proportion of Japanese students who prefer to use 3D VR presentation is more than proportion of Indonesian students who prefer to use 3D VR presentation. Indonesian students prefer to use 3D animation than 3D VR presentation.

4. Conclusion

The viewer perception of using 3D VR presentation and 3D Animation presentation can be influenced by nationality background. The Indonesian students more prefer to 3D Animation because of natural-like performance of 3D animation, and Japanese students more prefer to 3D VR because of the ease of operation. The difference of respondents' preferences is not influenced by the experience of playing 3D game, but is influenced by the performance and ease of 3D presentations.

Keywords: Design Presentation, Virtual Reality, Animation, 3D

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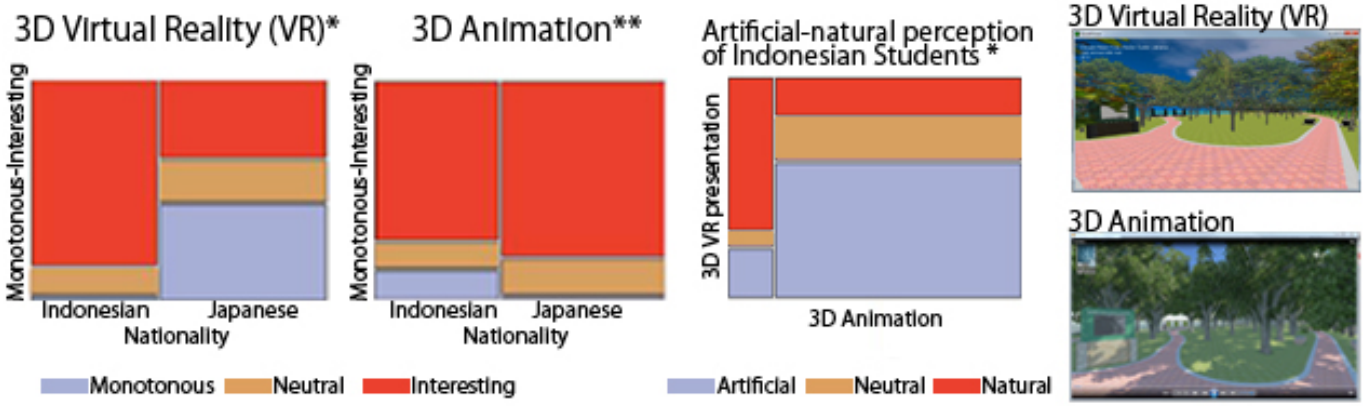

Figure 1. Respondents Preference of 3D VR and 3D Animation Presentation * p<.01 **p<.05

Japan Geoscience Union Meeting 2015
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HGG01-14 Room:101B Time:May 28 15:00-15:30

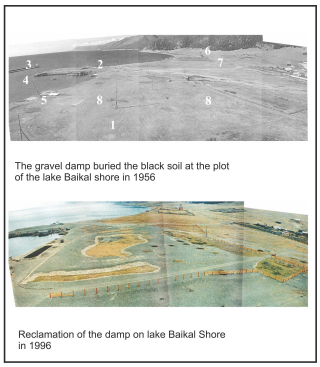
Geoplastics as a method of disturbed landscapes reclamation

BOLSHAKOV, Andrey[1*]

[1]Irkutsk State Technical University

The landscape, architecture, urban design factors allows you to restore the man-made landscaping are shown. The folded surface, that has right proportion of convex and concave cells, paved plots and live covers starts the processes of ecological restoration, aesthetic and functional ordering of the human activities space. The cases the authors geoplastics methods use are considered. 1.Reclamation of the damp on the shore of Lake Baikal; reclamation of the shallow recess in a high groundwater level; reclamation of upland-terraced granite quarry. 2. Coastal are landscaping in a major city. 3.The park design and realization at the degraded industrial area. These cases has confirmed that the new geoplastics technique is worked well.$_{AndreyBolshakov}$

Keywords: geoplastics method, recovery relief, disturbed landscape, cases of reclamation, landscape planning of the coastal area, park at the degraded industrial area



Japan Geoscience Union Meeting 2015
(May 24th - 28th at Makuhari, Chiba, Japan)

HGG01-15 Room:101B Time:May 28 15:30-15:45

History of Wells in Hangzhou City

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[1]Graduate School of Horticulture, Chiba University

1. Objective and background of study

Wells have been influencing the development of cities as residential water resources for residents. However, wells are diminishing along with development of water supply systems and urban redevelopment projects. In recent years, there have been initiatives in China to protect wells and utilize them in community development. In this study, the objective was set to clarify the history of wells with Hangzhou City's case.

2. Study Methods

Hangzhou City is located along the coastal area in Zhejiang Province, which is in East Central China. In this city, utilization of wells started approximately 1700 years ago. The objective of this study was set to analyze the history of wells in relation to changes of a city. Existing resources such as topography and maps and online information were used to study the number and locations of wells, population, and urban planning in Hangzhou City.

3. History of wells in Hangzhou City

(1) Formation stage

The first well in Hangzhou City was called Longjing. It was built during the Three Kingdoms Period (220-280 A.D.) and is located on the west side of West Lake. Another well, which is called Guopo Jing, was built during the Dongjin Dynasty (317-420 A.D.) on Daijing Street near Wushan in Shangcheng District. It also provided large amount of water, and served as the first public well for the Hangzhou City citizens.

(2) Development stage

At the beginning of the 8th century, Hangzhou City grew larger in size due to the development of silk and shipbuilding industries. The number of residents also grew from 15,000 in the 7th century to 86,000. In order to solve the drinking water shortage among the citizens, Li Mi (722-789 A.D.), who was the civil governor of Hangzhou City, used culvert. In between Yongjin Men and Qiantang Men (current Shangcheng District), where population was heaviest, he drew water from West Lake through the culvert and built six wells to secure daily life water in this castle town. These wells are called 'Six Wells', and each of them is called Xiangguo Jing, Xi Jing, Fang Jing, Jinniu Chi, Baigui Jing, and Xiaofang Jing respectively; and contributed to the expansion of the residential area of citizens.

(3) Maturity stage

In 1139, Hangzhou City became the capital of Nansong (1127-1279 A.D.). Due to the development of politics, economy and culture, the population of Hangzhou City reached 1,905,000 and many wells were built. During Minguo Era (1912-1949 A.D.), 4,842 wells existed in Hangzhou City, and on average, every 20 houses had one well.

(4) Decline stage

During the 1970s, water quality of wells in Hangzhou City rapidly deteriorated due to development of water supply systems, groundwater pollution, and city development projects. This led to close down many wells, usage of wells diminished; and many of the old wells disappeared.

In 2009, Hangzhou City government researched the number of wells and their ages. According to this research, there are 211 wells that were built during or earlier than 1950s. Among those, only 78 had been built before the 1900s. Compared to the number of wells counted in the maturity stage, which is 4,842, it has been clarified that remaining old wells are only approximately 1.61%.

(5) Revival stage

Hangzhou City established the 'Old Well Preservation Regulation' in 2009, and re-established old wells and the surrounding environment. Water quality purification was also put in place. Some wells are protected as cultural properties, and they have been restored for reuse, and the surrounding environment has been better managed.

4. Conclusion

In this study, the transition of wells was observed: Wells were built to support people's lives and disappeared as their standard of living improved. However, wells influenced city economy and culture, created regional sceneries, and developed city environment rich in nature. It can be concluded that our lives will be more convenient by utilizing wells in community development.

Keywords: Well, Hangzhou City, History

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② 317-420
③ 781-784
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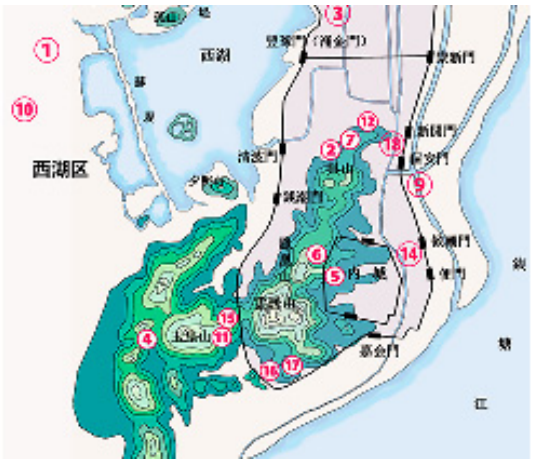

Japan Geoscience Union Meeting 2015
(May 24th - 28th at Makuhari, Chiba, Japan)

HGG01-16 Room:101B Time:May 28 15:45-16:00

Rescent trend of psychological evaluation of landscape from view point of survey paper

AOKI, Yoji[1*] ; RUPPRECHT, Christoph[2] ; TAKAYAMA, Norimasa[3]

[1]Open University of Japan, [2]Griffith University, [3]Forestry and Forest Products Research Institute in Japan

A trend of psychological evaluation of landscape from view point of survey paper
Aoki, Yoji., Christoph, Rupprecht and Takayama, Norimasa

The beginning of landscape evaluation using psychometrical method was 1967, and those studies were popularized during 1970-1990's, but recently such research has tended to decrease. Figure 1 showed that the number of survey papers was also similar tendency. Various technical developments of the measurements and analysis was tried and the first predictive model to explain the preference of landscapes was proposed by Shafer (1969). On the other hand, such approach was criticized by Carlson (1977), but this criticism never gave a proposal to solve these problems. The background of this deterioration was formed by the deadlock faced in the study of landscape evaluation study through the world.

At the beginning of this research subject, Japan and the United States were leading technical developments of this research realm in the 1970s. Japanese researchers were interested in the application of the results of experiments based on the assumption of universality and everlasting truth of their results. This assumption was formed by the simple racial and cultural background of Japan, which has a uniform national wide good primary education system with the high rate of entrance into universities and well diffused mass media of television. Due to their belief, planners applied their numerical results in their planning purposes.

On the other hand, researchers of the United States were interested in the effects of diverse ethnic and cultural backgrounds, because of the broad diversity in human resources, e.g. racial and cultural backgrounds, formed by the huge number of immigrants in the US. As a result, they hesitated to use their results directly in physical planning. The variety of stakeholders in their society, required consensus in the community and they needed more consideration to use their data in their planning. And they accumulated many studies in their scientific journals.

According to landscape evaluation research that spread from Japan and the United States to Europe and the world, the different results were obtained due to ethnic and cultural backgrounds similar to the United States. Researchers have run into the problem of what the results they obtained meant, i.e. what the landscape evaluation was. We now knew that the phenomenon of landscape evaluation is part of the mental aspects of humans realized by their experience at the site and at the time, and the human understanding of the landscape appreciation has evolved through their historical age (Bourassa 1991, Aoki and Kitamura 2001).

This problem brought us new research to think about, namely universality and immutability in the era transition as well as landscape evaluation in the regions. Planners, who shaped the landscape by physical planning, began to anxious about their results and know how landscape evaluation results obtained at that time could be proven to be true and keep their usefulness in planning. Here, landscape evaluation study faced a big wall.

However, landscape evaluation in recent years, actively researched in developing countries, and the number of papers has increased again since 2011. The research from these developing countries might break through the wall currently faced by landscape evaluation. Based on the discussion in JpGU2013 and JpGU2014, I hope that the outcome of this year's workshop supports these efforts.

Keywords: survey papers, landscape evaluation research, recent trend

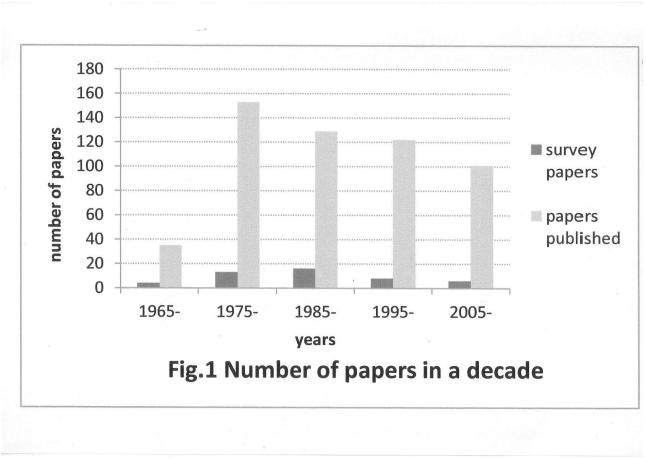

Fig.1 Number of papers in a decade

Japan Geoscience Union Meeting 2015
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HGG01-P01 Room:Convention Hall Time:May 27 18:15-19:30

Geoecological Systems on Cone Karst in Tropical and Subtropical Regions, Eastern and Southeastern Asia

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[1]Faculty of Education, University of the Ryukyus

Physical geography is an important discipline to evaluate natural and cultural landscapes. In eastern and southeastern Asia various karst landforms lie on terrains, where temperate, subtropical and tropical zones are distributed in terms of climatic geomorphology. Previous studies mainly discussed climatic controls on karst landforms based on measurements on climatic environments such as air temperature, soil moisture and carbon dioxide concentration. However, geomorphic processes on karst landforms depend on not only climatic conditions but also limestone formation. This study compares several fields located in low and mid latitudes regions in eastern and southeastern Asia, where karst landscapes are extensively distributed on various age limestone. Especially, this poster presentation focuses cone karst formed under different climate regions. Cone karst is generally considered as a tropical and subtropical landform related with rapid chemical weathering controlled by high temperature and heavy rainfall. Field observation, however, revealed that various geomorphic processes occur in cone karst and surrounding areas. For instance, cone karst in Ryukyu Islands (Southwestern Japan) is characterized by layered limestone, where physical weathering easily occurs by disintegration. In contrast, cone karst in low latitude regions (e.g. Visayas in central Philippines) frequently shows deep chemical weathering by rapid decomposition and leaching, which is affected by both tropical climate and non-layered limestone. These environments on geosphere influence geoecosystems and human activities such as soil, vegetation and land use. This observation indicates that limestone formation also controls karst landscapes, and that geomorphology and geoecology play important roles in landscape appreciation.

Keywords: landscape, karst, limestone, weathering, climatic geomorphology, geoecology

Japan Geoscience Union Meeting 2015
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HGG01-P02 Room:Convention Hall Time:May 27 18:15-19:30

Impact of planters in alley environments: A case study in Kyoto area

MIZUKAMI, Shogo[1*]

[1]Bukkyo University

Introduction

In many previous studies, it has been shown that greenery contributes to landscape appreciation in urban areas. However, it is difficult to conserve green space in urban areas. However, residential houses constitute a large part of urban land use. In addition to public administration, residents also should be encouraged to grow plants in their private gardens to create a greener environment in future.

Planters could be considered to be mobile green spaces and can be placed in environments without soil. Therefore, planters enable development of green environments in urban spaces outside gardens, thereby contributing to greener city environments. In particular, placing planters in alleys could improve the amount of greenery.

Alleys are spaces which are close to people's lives. They tend to have a double role as a public thoroughfare and a private space for the local community to meet. If planters are placed in these alleys, they could possibly serve as a trigger for conversation, a connection between neighbors, and a place for the local community to interact with each other.

The present case study in Kyoto area, examined the function and usefulness of planters in terms of their impact on the local resident consciousness. Moreover, this study also examined the relation between the number of pot plants and condition of environment. The primary purpose of this study was to examine whether the planters contributed to landscape appreciation in the alley and in the local community.

Methods

From an urban area in Kyoto, 126 alleys were selected for this study. A survey regarding the alleys was conducted with 278 residents living around alleys.

(1) Text mining approach

A text mining approach was applied to analyze the responses about the impression of the alleys. Correspondence analysis and cluster analysis were also applied for the analysis.

(2) Physical environmental condition

We counted the number of planters in each alley. Further, we examined the relation between the number of planters in, and the width and forms of the alleys. Alleys were classified into six categories, identified by direction of movement and forms, and 5 categories as per their width, based on measurements of 2 meters.

(3) Resident consciousness

We investigated activities of neighborhood community and degree of peoples' friendliness in each neighborhood.

Results

(1) Text mining approach

Frequent key words regarding the residents' comments on the alley were identified and grouped. The results showed that an extension of commodities, for example, "pot plant," "bike," and "bicycle," were representative of objects found in the alleys. "Green condition" was also one of the 5 concepts residents recognized when classifying the alley.

(2) Physical environmental condition

A correlation was found between the number of planters and alley forms as well as between the number of planters and the width of the alley. It was found that many planters are placed in narrow alleys.

(3) Resident consciousness

It was found that residents who placed many planters in the alleys frequently used the space for chatting and sharing something with the neighbors, thus increasing the activities in the neighborhood community.

Considerations

Residents believed planters to be important parts of the alley as well as of the greening of the environment. However, alley width and forms affected the number of planters which were placed in the alleys. It was found that in many cases, the residents' consciousness prompted them to place the planters. Further, because potted trees and flowers require maintenance, neighbors often met each other in the alley, which encouraged and developed neighborhood participation. Therefore, it could be said that the greening of the alleys contributed to both the general urban landscape and the development of the local community.

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Keywords: alleys, planters, extension of commodity, greenery, local community

Japan Geoscience Union Meeting 2015
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HGG01-P03 Room:Convention Hall Time:May 27 18:15-19:30

Attitudinal Difference Toward Green Conservation Activities Based on Population Density At Prefectural Level

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[1]National University Corporation of Tsukuba University of Technology, [2]Graduate School of Horticulture, Chiba University

1.Introduction

Green conservation in cities is one of the ways to develop a green city environment. Green conservation activities by citizens have been in action in Japanese cities. In this study, the objective was defined to uncover differences between cities and other areas with respect to situations of green conservation activities.

2. Study Methods

An attitude survey regarding participation in green conservation activities was conducted with citizens as a study subject (n=1,500). This survey was conducted online through a private company specialized in online research. Research contents included: demographics of respondents, participation experience in conservation activities, interest in participation, and attitude toward participation. In this study, for the purpose of comparison, prefectures were divided into three groups based on population density of each regional government, with 3,000 populations per square kilometer and 1,000 populations per square kilometer as cut-off figures. The prefectures with population density of 3,000 populations per square kilometer include Tokyo (6,016/km^2), Osaka (4,667/km^2), and Kanagawa (3,745/km^2); and this group is indicated as *O3000* in the article. Those with population density of below 3,000 but 1,000 or above per square kilometer include Saitama (1,894/km^2), Aichi (1,438/km^2), Chiba (1,206/km^2), and Fukuoka (1,019/km^2); and this group is indicated as *U3000*. Lastly, all other regional governments fall under the *U1000* group with population density below 1,000/km^2. A chi-square test was applied to this analysis.

3. Results And Considerations

3.1 Individual demographics

The respondents consist of 50% each of male and female with 750 respondents each. The distribution of ages was; 250 respondents (16.7%) for each 10-year segment from 10's to 50's, 188 (12.5%) in 60's, and 62 (4.1%) in 70's. As for the employment status, 779 (51.9%) were employed, 439 (29.1%) were unemployed (e.g. homemaker), and 285 (19.0%) were under another status. The respondents are relatively well distributed through different genders and age segments. Next, respondents' residence areas were as following: The number of residents in the area of *O3000* counted 475 (31.7%), that in *U3000*, 328 (21.9%), and that in *U1000*, 697 (46.5%).

3.2 Participation experience and interest

The number of respondents who had had participation experience in green conservation activities counted 92 (19.4%) in *O3000*, 86 (26.2%) in *U3000,* and 190 (27.3%) in *U1000*; and a statistically significant difference was detected ($p<.05$). The number of those who are interested in participation was; 178 (37.5%) in *O3000*, 141 (43.0%) in *U3000*, and 190 (45.3%) in *U1000*; and this result also exhibited a statistically significant difference ($p<.05$). Compared to the respondents from *O3000*, those in *U3000* and *U1000* resulted with a higher rate of participation experience and interest in green conservation activities.

3.3 Attitude towards participation in conservation activities

The number of respondents who answered, *don't know how to collect information* was 216 (45.5%) in *O3000*, 120 (36.6%) in *U3000*, and 307 (44.0%) in *U1000*, with which a statistically significant difference was detected ($p<.05$). There was no significant difference with 14 other question items.

4. Conclusion

In the study of participation experience and interest in green conservation activities, there was a statistically significant difference between regional governments of population density 3000/km^2 and above and those of below 3000/km^2. From this result, difference has been identified between cities and other areas with respect to the situations of green conservation activities.

Keywords: Green Conservation Activity, Population Density, Prefectural Level

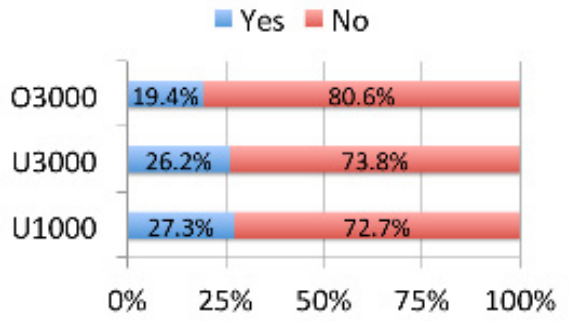

Fig.1 The percentage of participation experience in green conservation activities (p<.05)

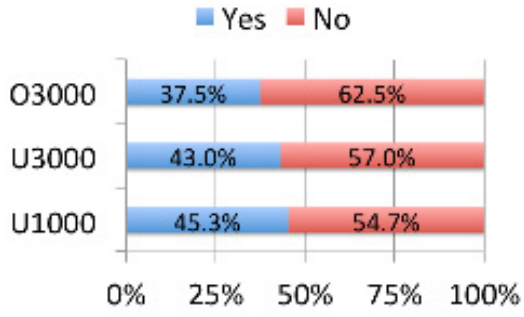

Fig.2 The percentage of those who are interested in participation (p<.05)

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Comparison of Scenery Images of Japanese And Those of Indian Habitants in Fiji Through Image Sketches

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In this study, the objective was set to clarify the difference in images of forests between Japanese and Indian habitants in Fiji.

The gender composition of respondents was the same for both Japanese and Indian habitants in Fiji: 19 males and 31 females. The age distribution of respondents was also the same for both subjects: 21 respondents in the 20's, 6 in 30's, and 23 in 40's and above. With habitants in Fiji, a sketching survey was conducted in the Republic of Fiji between August and December in 2013. The same type of survey was administered with Japanese respondents between May and December in 2014.

In the respondents' sketches of FORESTS, many nature elements were drawn, such as mountains, trees, and the sun. In particular, the sketches by Indian habitants in Fiji typically included palm trees, which are common in tropical areas, together with mountains as a main feature. In addition, houses and villages were also included in the nature scenery. This result possibly implies that nature is closely connected with their everyday life. As a result of responses by each ethnic group, a statistically significant difference ($p<.05$) was detected between the Japanese and the Indians with the drawing of NATURE: 94% of Japanese and 54% of Indians. Another statistically significant difference ($p<.05$) was detected with the drawing of FARMING VILLAGE: 6% of Japanese and 46% of Indians. It is possible to generalize that Japanese people capture FOREST in the nature, while Indians consider FOREST not only as nature but also as part of a farming village. The definition of NATURE is where scenery is constructed with mountains, rivers, and forest trees; and that of FARMING VILLAGE is where manmade objects such as houses and farms are drawn as a main feature. Through the analysis of sketch details, it was observed that Japanese would draw details of natural items, while Indians do so with plants and vegetation items.

Next, spatial structures were examined per each ethnic group. A statistically significant difference was detected both in the close range view, 46% of Japanese and 2% of Indians, and in the distant view, 4% of Japanese and 68% of Indians. Regarding the spatial structures, majority of Japanese described forest scenery as a close range view, whereas Indians drew this as a distant view. A close range view by Japanese would include forests in the nearer site. A distant view sketch by Indians typically situates a range of mountains in a distance, from which waterfalls and rivers flow out and eventually connect to the ocean. In addition, other things were drawn surrounding these elements: palm trees, which are typical in tropical areas, other trees, and manmade objects such as houses and villages.

Lastly, forms of trees drawn were studied per each ethnic group. A statistically significant difference ($p<.05$) was detected with a cone shape, a random shape, a round shape, and a palm tree shape: With the cone shape, 43% of Japanese and 6% of Indian; the random shape, 28% of Japanese and 4% of Indian; the round shape, 39% of Japanese and 62% of Indian; and the palm tree shape, 0% of Japanese and 86% of Indian. Japanese drew coniferous trees such as cedar in a cone shape, while Indians who inhabit Fiji drew palm trees that are typical to tropical areas and known for their unique shape. The shapes of trees in the forest scenery sketches were the ones that were originated from the area of certain geographic location, geology, and weather.

Keywords: Scenery Images, Japanese, Indian, Comparison

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Acceptance of Forest Aesthetics in Japan ? A Technological System Applicable for Different Countries and Vegetation

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1. Backgrounds and Purpose of the Study

The existence of the Jingu Shrine forest is very precious as it provides vast green space in the center of the city. Upon the development of the forest plan for the inner garden of Meiji Jingu Shrine, although there seemed to have been the involvement of various forestry academics that had engaged in forest aesthetics during their studies abroad in Germany (Imaizumi, 2013), how the specific details were reflected in the forest garden plan was still unknown.

This study focuses on the specific area of forest management/silviculture, revealing both similarities and differences between the two, and considers the impact of forest aesthetics in constructing the Meiji Jingu Shrine forest.

2. Research Materials and Methods

2-1 Research Materials and Summary

The forest garden plan adopted the Meiji Jingu Shrine's monograph "Meiji Jingu Shrine grounds forest plan(Hongo 1921)" and for forest aesthetics, the second edition of the English version of "Forest Aesthetics (Cook2008) " was adopted as source materials.

2-2 Research Methods

From the overall review and design of the forest garden plan, contents that arise depending on the planning stage of the respective sections were extracted, descriptions about forest aesthetics corresponding to these items were extracted, matches the contents of the forest garden plan to the contents of the forest aesthetics was prepared, and upon clarifying the similarities and differences, the effect of forest aesthetics on the forest garden plan was considered (Shimizu et al.2014).

3. Results and Discussions

In the table of contents of the forest garden plan, the components that apply to each "section" indicates the processes for the construction of the forest garden, and they substantially corresponded to the structure that are applicable to the chapters pertaining to forest aesthetics, application Part A, chapters for forest construction and forest economics (Shimizu et al.2014).

In addition, for each "section", as a result of determining whether there are similarities and differences in the contents of each "item" (5) that respectively corresponds to the forest garden planning and forest aesthetics, there were 22 items with similarities and 13 items with differences. Upon classification of these items, the differences were noted in the descriptions for location and purpose. Similarities were noted in scenic beauty, use, respecting site conditions, constructing a forest with variety, forest duration, ancient trees, ponds and fountains, flow, respecting the placement of the forest and landscape viewpoints. In particular, although the forest plan aims to achieve a forest strictly composed of Castanopsis, oak, and camphor, it became clear that the effects of forest aesthetics can be seen pervasively in forest construction, by taking advantage of the original composition of the forest upon construction, considering the planting of coniferous trees in an area wooded with red pines and broadleaf deciduous trees, methods to utilize the original forest, and taking that as a concept of developing beauty.

Citations and References:

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3) Heinrich von Salisch: Forest Aesthetics, Walter L.Cook

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5) An item is, for example, the comparison of information on the natural environment, targeted design, and consideration of silvicultural methods by item.

Keywords: Forest Aesthetics, Meiji Jingu Shrine forest, Takanori Hongo, Heinrich von Salisch, Meiji Jingu Shrine Inner Garden Forest Garden General and Fu