

日本・韓国・中国の被験者による観光景観の心理的評価に関する比較研究 Comparative study of the psychological evaluation for the sightseeing scenes by Japanese, Korean and Chinese subjects

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1 Introduction

Japan is faced with decline of population, because of low birthrate. Especially, in the many regions without active industries, aging is advancing. Under this condition, tourism is being paid attention, as newer industry, because the demand for travel increases in the countries around Japan. However, the needs of people in these countries have not been clarified in detail. In this study, the similarities and differences in the psychological evaluation for the sightseeing scenes in Hiroshima by Japanese, Korean and Chinese subjects are examined, to find the new attractive points felt by foreigners.

2 Outline of the experiment

Forty scenes as the stimuli in the psychological experiments were chosen from 778 scenes of the photo gallery in the homepages for sightseeing in Hiroshima prefecture. In the selection, all of the scenes were classified to 34 groups by KJ technique and one scene was extracted from each group as a representative. Then, the six scenes were added for comparison with other scenes.

The questionnaire consisted of two parts, a face sheet and a psychological evaluation sheet for each scene. The face sheet included the subjects' attributes and the consciousness of Japan and Hiroshima. The psychological evaluation sheet consisted of comprehensive evaluation items, Willingness to visit, Interest, Likeness of Japan, etc. and 13 image evaluation items based on the Semantic Differential technique.

The foreign students in Hiroshima University and Hiroshima Shudo University took part in the experiment, as the Chinese and Korean subjects. The students in Hiroshima University were used as the Japanese subjects. The number of the Chinese, Korean and Japanese subjects were 90, 26 and 127, respectively.

3 Comprehensive evaluations by the three subjects groups

In the evaluation of Willingness to visit, the scenes largely occupied by artificial elements were evaluated lower. On the other hand, the scenes including nature and the scenes of Japanese gardens were evaluated higher. These tendencies were almost similar among the three subjects groups. However, few natural scenes were evaluated higher by the foreign subjects and lower by the Japanese subjects.

In Likeness of Japan, the similarities among the three subjects groups were shown in the scenes with historical shrines or temples and the traditional streetscape scenes. However, the evaluation of the Japanese subjects differed from it of the foreign subjects in the scenes of ravines and the scenes of terraced paddy fields. These scenes were evaluated more Japanese by former subjects. It is supposed that the foreign subjects were used to see the natural scenes like them in their mother countries.

4 The relationships between the evaluation

The factor analysis of the principal factor method was applied to the data combined the image evaluation by three subjects groups. Based on the pairs of bipolar adjectives with high factor loadings, factor 1 to 4 extracted were interpreted as Inherency, Pleasantness, Traditionality and Openness.

According to the correlation coefficients between the comprehensive evaluation items and these four factors, Inherency had more influence on Willingness to visit in the foreign subjects compared with the Japanese subjects. In the results of the Chinese subjects, Likeness of Japan was related to Inherence. On the other hand, Pleasantness affected Likeness of Japan in the results of the Japanese subjects.

5 Conclusion

In the psychological evaluation for the forty sightseeing scenes in Hiroshima, the similarities and differences among three subjects groups were grasped. However, the foreign students were living in Japan and they might obtain the knowledge and the experiences concerned with Japan. Therefore, it will be required to compare the results with the evaluation by the people who have lived in their mother countries and have not been in other countries.

キーワード: 観光景観, 外国人留学生, 心理的評価

Keywords: sightseeing scene, foreign student, psychological evaluation

日本と韓国における風景評価の比較研究 A Comparative Study on Landscape Evaluation Between Japan and Korea

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はじめに

本研究では、日本と韓国の両国で撮影した風景写真を、両国の大学生が識別・評価することにより、両国の人々の風景の理解の違いを明らかにすると共に、評価される風景要素の特徴について明らかにすることを目的とした。

研究方法

1) まず両国の国立公園の風景の写真を収集した。次に、「滝」「森林」「海岸」「河川」「建築物」「湿地」「山岳」「湖」の景観を各国 37 枚、合計 74 枚の写真を選び出した。2) これら写真を対象に大学生 105 名に、写真をグルーピングに分けてもらい、それぞれのグループに名称をつけた。3) さらに、同じ被験者が、写真を好ましさ(5段階)と異国情緒(3段階)で評価した。4) また、それぞれ国らしさを示す写真を3つずつ選択させることによって、その国らしい自然風景を抽出した。日本の被験者は千葉大学の所属学生 52 名であった。韓国の被験者は Seoul National University 所属の学生 53 名であった。写真グループの分析には、クラスター分析(ワード法、平方ユークリッド距離)を用いた。評価の違いには、マン・ホイットニーの U 検定を使用した。

研究結果

写真の分類では、日本と韓国で異なるグループに分類された写真が7枚あった。そのうち3枚は、日本人が「河川」としているものを、韓国人が「湖」に分類した。また、滝と寺院がセットとなった日本の名所の写真では韓国人は「滝」と分類する一方で、日本人は建築物などのグループ名称の「人文景観」と分類した。好ましさの分析では、9つの写真で有意差が見られた。異国情緒の評価では、36枚の写真が有意差を示さなかった。この36枚のうち、日本の写真が15枚、韓国の写真が21枚であった。また日本と韓国の両国共に「森」「海岸」の異国情緒の評価が低かった。相手国らしさを示す写真の選択では、人文景観が半数(日本59%、韓国49%)を占めた。一方で、自国らしさを示す写真の選択では、人文景観(日本25%、韓国29%)や、著名な名所などの風景が選ばれていた。特に韓国人は、自国らしい写真の選択にばらつきが見られた。

考察

写真の分類では、日本人と韓国人は、ほぼ同様の景観グループを識別した。しかし、韓国人が「湖」と分類した「河川」の写真には流域に岩が見られないという特徴を持つ。つまり、韓国人は河川と岩をセットで捉えている可能性がある。森林や海岸などの景観では、日本と韓国はほぼ同様に異国情緒を感じていなかった。しかし、建築部を含む人文景観では、それぞれの国の特徴を見分けることができたようであった。これら評価結果からは、日本人と韓国人の風景評価には共通点が多いことを示している。国らしさを示す写真の選択からも、人文風景が国らしさを区別する要素となることを示していた。国らしさを示す写真の選択からは、自然風景のみの写真が選択されることが少なく、日本人と韓国人は、相手の国の自然風景に明確なイメージを持っていない可能性がある。特に、韓国では韓国らしい代表的な自然風景が共有されていない可能性がある。

両国は風景認識や評価で共通する部分が多く存在する一方で、差異も存在することが明らかになった。今回の調査では大学生を対象としたが、今回の調査結果を踏まえて一般市民を含めた研究に発展する予定である。

キーワード: 風景評価, 日本, 韓国, 国際比較

Keywords: Landscape evaluation, Japan, Korea, International comparison

A Comparative Study on Landscape Evaluation Between Japan and Indonesia A Comparative Study on Landscape Evaluation Between Japan and Indonesia

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Introduction

The preference of natural landscapes is important for landscape planning from the view point of tourism. The purpose of this study is to clarify the differences of scenery recognition of Japan and Indonesia, and to find the characteristics of scenery elements that are highly valued.

Study Methods

The study was conducted with the following four steps: 1) after collecting the scenery photos of natural landscape from Indonesia (33 photos) and Japan (35 photos) of *waterfall*, *forest*, *seacoast*, *river*, *wetland*, *mountain*, and *lake* which the total of 68 photos, 2) these photos were categorized in groups by 105 university students and each group was labeled with a name, 3) the same students evaluated the photos according to favorability (5-scale) and exoticism (3-scale). The respondents from Japan were 55 students at Chiba University, and from Indonesia were 50 students at Bogor Agricultural University. Cluster analysis (Ward's method, squared Euclidean distance) was applied for the analysis of photo categories, and Mann-Whitney U Test was applied for the analysis of evaluation variances.

Results and Considerations

In the photo grouping, the Japanese and Indonesian distinguished almost similar scenery groups. There were seven photos which were categorized in different groups in Japan and Indonesia. It was notable that the photos of *forest* which were categorized as *wetland* by the Japanese because it consists of high grass. Therefore, it is possible that the Japanese recognize grass as a set in wetland. Two rivers in Japan and Indonesia were categorized as *river* among Indonesian, but Japanese categorized it as *forest and mountain in distant view*. The *lake* was categorized by Indonesian, but Japanese categorized it as *forest and mountain in distant view*. The *forest* was categorized by Indonesian, but Japanese categorized it as *forest and mountain in distant view*. Japanese saw the forest from the bottom, so they could see the shape of the mountain which consists of forest. Japanese also differs the wetland as *wetland in distant view* and *wetland in close up view*. From the distant view, Japanese only could see the grassland as main view, but from the close up view they could see the detail of landscape element such as forest nearby the wetland. As for the results of preferences evaluation, statistically significant differences were detected with 25 photos, 17 were from Japan and 8 were from Indonesia. On the other hand, exoticism evaluation detected statistically significant differences with 48 photos, 28 were from Japan and 20 were from Indonesia. Preferences evaluation between Japanese and Indonesian were also quite similar. Neither Japanese nor Indonesian recognized preferences with sceneries of *forest* and *wetland*. However, either the Japanese or Indonesian prefer *waterfall* and *seacoast* than others. Japanese and Indonesian like prefer natural landscape with water element than without it. While, based on exoticism evaluation, *river* and *wetland* were not recognized by both of countries, but *coast* and *waterfall* were recognized by both of countries. It is inferred that water element in landscape have an important role in scenic beauty. River and wetland in this photos have no landscape element diversity in it. Both of countries share commonality in scenery evaluations of preferences and exoticism, but differences have been also found in recognition based on the viewing point.

キーワード: landscape evaluation, grouping test, preference, exoticism, Cluster analysis, Mann-Whitney U Test

Keywords: landscape evaluation, grouping test, preference, exoticism, Cluster analysis, Mann-Whitney U Test

日本とロシアの森林イメージ Forest Imagery in Japan and Russia

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This study investigated the ways of seeing the forest in Japan and Russia by using Landscape Image Sketching Technique (LIST). With the globalization of tourism, the recreation needs are diversifying on the one hand; local culture and customs can become a new tourist resource on the other. Understanding culturally different meanings of forests will give a new insight into tourism promotion as well as natural area management.

For cross-national research, Japan and Russia were selected. Japan and Russia are neighbouring countries, however, the mutual communication has been not enough. This report is an interim report of JAPAN-RUSSIA Joint Research Project since 2008 'Comparison of Natural Landscape Evaluation between Japan and Russia', which is financed by Japan Society for the Promotion of Science (JSPS) and Russian Foundation for Basic Research (RFBR).

Landscape Image Sketching Technique (LIST) is an empirical methodology to exteriorize an individual landscape image as a scene sketch by respondents. The 'landscape image' is defined as a medium between one's individual values and social construction as well as physical landscape and landscape representation. The visual data from one's perspective mirror the respondents' identification and symbolization of the landscape and then reconstruction of the meaning in its composition as a figure-ground relationship. In other words, the sketching procedure can coordinate the inconsistent verbal accounts in a symbolic picture, which is the advantage of the scene sketch. LIST reveals 'what' people are looking at as well as 'how' they are viewing their environment, thus giving us new insights into the understanding of the public image through landscape perception.

The empirical data were obtained with questionnaire in Japanese and Russian language. The respondents were students of Moscow University, Irkutsk University, Chiba University and Hokkaido University. The site selection intended to diversify the forest images considering geographic position as well as vegetation of each research site.

About 50 respondents in each research site were asked to make a landscape image sketch of their spontaneous imagination of a 'forest' with some keywords and text. The visual data were analyzed through three phases. Landscape elements were identified visually and linguistically and labeled first. View angle and distance were classified according to the visual appearance and combination of each landscape elements and viewpoint. Then, self-orientation in the represented landscape was classified in terms of the combination and structure of the elements and viewpoint. Finally, the meaning or motive of the landscape image sketches was interpreted comprehensively with relation to the labeled elements and verbal description.

As results, landscape image sketches showed diverse variety in each research site, but different characteristics between Japan and Russia suggested the fundamental difference in the ways of seeing the landscape through cultural framework. The preference for broadleaf wood forest in Japan and mixed forest in Russia was main difference concerning 'what' they are looking at as a forest. The result also showed a contrast between the wide ranges of categories in Japan and the certain distance in Russia, which represents 'how' they are viewing the forest.

The results implied locality-specific forest uses and accessibility of forests in each research site. In Japanese sample, the viewpoints were seen in the sketches representing scenes of their recreational uses in forest. In Russia, their romantic scenes were usually objectified describing the forests in detail. The results can suggest the different aesthetic norm in each cultural framework. In short, the research findings indicate different ways of seeing the landscape: a mere backdrop to one's experience in Japan and romantic and aesthetic harmony of forest landscape in Russia.

キーワード: 風景イメージ, 森林, 日本, ロシア, 描画法

Keywords: landscape imagery, forest, Japan, Russia, sketch drawing

日露の環境態度の相違点とその理由

Differences in and causes of Environmental Attitudes between Russia and Japan

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Attitudes toward the natural environment, such as perception of color and susceptibility to temperature, may be of genetic origin due to different physical characteristics. However, to adapt to the natural environment and establish a rich lifestyle, it is essential to gather people's views and values, analyze them, and identify the characteristics and constraints of the natural environment in which people live, since these strongly influence the environmental values and experience of each individual.

We conducted some experiments to investigate Japanese and Russian attitudes toward the natural environment. In this study to compare both countries, we did the following: 1) clarified the differences and common points in environmental attitude between the two countries and among research sites, and 2) discussed their causes.

First, we surveyed the attributes of respondents at each research site (4-site in Japan; 3-site in Russia). Subsequently, to examine the environmental attitudes between the two countries, the Thompson and Barton Scale Test (TBS) and New Environmental Paradigm (NEP) were used for the investigations.

The analysis clarified that 1) Russia is more ecocentric than Japan, 2) Russia is less anthropocentric than Japan, and 3) Russia has lower environmental apathy than Japan. These results suggest that Russian respondents are highly interested in the natural environment and take the ecosystem into consideration, and attempt to adjust their own lives to the natural environment more than Japanese respondents. Thus, Russians are more highly orientated toward human and environmental symbiosis than Japanese. The lack of any statistically significant difference in any indicator of environmental attitudes in a domestic comparison such as Moscow - Irkutsk and Hokkaido - Chiba was also interesting. In other words, certain common factors surrounding the respondents of each country led to this result, whereupon the reasons for the causes were discussed.

キーワード: 異文化比較, 環境態度, 環境無関心, 人間中心主義, 生態系中心主義

Keywords: Cross-Cultural Comparison, Environmental Attitude, Environmental apathy, Anthropocentrism, Ecocentrism

自然風景の評価に影響する要因は文化か地理的環境か？

Which does affect the natural landscape appreciation strongly, cultural or geological difference?

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Many cross-cultural researches pointed out the difference of landscape appreciation by countries. But the causes of these differences were not cleared still now.

Our research group conducted the cross-cultural research about landscape appreciation between Japan (Sapporo, Chiba, Kyoto and Miyazaki) and Russia (Moscow, Irkutsk and Kamchatka). This project was consisted by three main investigation, 1) comparison of natural landscape appreciation and their impression using photos, 2) comparison of environmental attitude, and 3) comparison of forest images by literal analysis and landscape image sketch analysis. The purpose of this paper is to discuss the cause of differences of landscape appreciation through the review of these results.

The photo based study showed that there were international differences about natural landscape appreciation between Russian and Japanese respondents, as well as national difference between groups of Russian respondents from different regions (Moscow, Irkutsk and Kamchatka). For the grouping of landscapes the most important feature appeared to be the presence/absence of water and type of water basin. Topography is also important for the Russians, while both visual and seasonal characteristics are significant for the Japanese.

The comparison of environmental attitude using the Thompson and Barton Scale Test (TBS) and New Environmental Paradigm (NEP) showed Russian respondents were highly orientated toward human and environmental symbiosis than Japanese. It was also interesting that there was no statistically significant difference in any indicator of environmental attitudes in the national comparison such as Moscow ? Irkutsk, or Hokkaido ? Chiba.

The analysis of landscape image sketches revealed differences between respondents in Japan and Russia. The typical landscape images of a forest were represented objectively, as aesthetic scenery in Russia and subjectively, as a practical place in Japan. The results suggested a fundamental difference in ways of seeing the landscape through individual perceptions rather than normative views on forests.

These three results indicated the differences of landscape appreciation between Japanese and Russian respondents. And such differences were also found between Russian respondents. Russia is one of the biggest countries in the world, so their landscapes were really diverse. Moscow region is flat and covered by forest. Irkutsk region is surrounding by mountainous landscapes, and close to Baikal lake. Kamchatka region is along with coast and has volcano. Because there were no difference about environmental attitude between Russian respondents, the natural settings of surrounding area would influent their landscape appreciation.

キーワード: 自然風景, 風景評価, 日本, ロシア, 異文化研究

Keywords: natural landscape, landscape appreciation, Japan, Russia, cross-cultural research

景観要素に対する文化的認識や象徴的イメージが自然性の印象に与える影響 Effect of cultural cognition and symbolic imagery of landscape elements on the impression of naturalness

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環境の評価においては、人の視覚で捉えられる景観が有効な評価の一つであり、景観評価では、視野内に占める景観要素の物理量が評価にかかわる主要因であるとされ、様々な研究が蓄積されてきた。例えば、都市景観は人工的要素の占める割合が高く、逆に、水面、植生や山等の自然要素の見えの量は景観評価を高めるとされる。都市において自然要素の代表とされる緑に関しては、緑視率が指標とされ、心理的評価と関連づけられ環境や景観の評価に利用されてきた。

しかし、複数の要素によって構成される環境や景観の総合評価として印象が重視され、印象は、地域・環境や文化によって、受け取られ方が異なる場合もあると考えられる。

本研究では、緑、山並みや庭園といった自然要素を中心とした景観に関する印象を調べ、景観要素の状態の違いや象徴的意味合いが自然性の印象評価に与える影響について報告する。

人為的かわり：植生を指標とした自然性の評価には、植生自然度や潜在性などさまざまな判断基準がある。種の種類や構成の違いが基準になり得るが、同種同体における状態の違いも視覚的に変化をもたらし、自然性の印象に影響を与えられられる。具体的には、緑という自然要素に手入れという人為的な整形が行われることで、視覚的な状態の変化を生み、人工的な性質を持ち得ると考えられる。緑の印象構造を調べたところ、量的な違い、多様性、整形性によって構成できることを明らかにした。また、整形性は手入れの度合いと強い相関関係を示し、自然性の印象へ強い影響力を示した。

文化や信仰の対象：都市の外部に位置する山並みの見えが、都市中心市街地において遠景の景観として捉えられても、視野内に占める面積の割合は小さい。しかしながら、山並みは自然景観の眺望として重要な意味をもち文化的にも認識されてきたため、景観評価において肯定的意味を持つ。山並みの見えの量を測定し、文献資料に表象されている山並みに関する言及内容から環境に対する印象を捉えた。その結果、山は古くから自然の象徴や信仰の場として、記号としての意味を持ち、山並みの見えは小さくとも人々に与える印象は強いことが示された。

象徴的イメージ：人々の景観に対する印象は、景観から得られる直接の知覚情報だけでなく、その対象に見立てられるイメージにより影響を受けられられる。枯山水庭園は、人為的に作られた空間内に大自然を象徴する造園技法であり、草木や水域を積極的に用いることなく、空間内には存在しない山や大海が表現され、スケールの異なる大自然を人為的な空間内に凝縮し表現している。ここでは、枯山水庭園を対象に、抽象化して表現された景観から、人々が主体的に想像することで認識される自然の印象を把握した。印象評価の結果、枯山水庭園はシンプルな構造の庭園にもかかわらず、多様で鮮やかな印象を受け、水のない環境であるが海や川等の水域が想像されるなどの結果がみられ、象徴される環境のイメージが印象へ影響することが示された。

同じ種類の景観要素であっても、状態の違いにより印象が変化する可能性があり、対象要素が持つ文化的な表象は、見えが小さくとも強い印象を与える場合がある。また、実際には目前に存在しないイメージの世界によって間接的に表現される景観が印象に影響を及ぼす可能性がある。

したがって、多様な構成要素を持つ景観に対して人々が抱く印象をどのように測定していくのかを検討する必要がある。また、国や地域の違いによって景観の文化的価値や意味づけが異なる中で、文化的認識や象徴的な意味をどのように共通項として把握していくかを検討する必要がある。

キーワード: 景観認知, 状態の違い, 象徴, 見立て, イメージ

Keywords: landscape perception, state variation, symbolic, analogy, imagery

Some aspects of questionnaire creation for researches of landscapes esthetic quality Some aspects of questionnaire creation for researches of landscapes esthetic quality

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It is known that the polling method by the majority of researchers is considered as subjective. On the other hand, now it is necessary for relying on public opinion and it can be used as a base for comparison with the new developed techniques of estimation of landscape esthetic quality. For this reason questioning is an important stage of carrying out of the landscape esthetic estimates of the studied area. The first challenge faced by the researchers is the complexity of the questioning on the place within the research area.

Advantage of using pictures is a possibility to take them printed to make questioning in any territory. In this case special technical equipment is not required. However not every picture can be used for this task.

For receiving the qualitative and representative pictures suitable for making questioning the researcher needs to know and consider the features of visual system of the person and optical system: 1) rules of landscape photography, 2) the principles of visual perception, 3) features of display of object by camera (a color rendition and distortion of forms with distance from the focusing center). Besides, pictures have to comply with some technical requirements: 1) to display the prevailing landscapes, 2) the horizontal corner of the review is 100-120 degrees, 3) pictures must be accurate both on the near plan, and on average and distant plans.

In the researched area the most characteristic landscape types are determined by using the features of human visual perception then these landscapes are pictured implementing the methods of landscape photography, and considering the features of the filming system.

The area of the research was the northeastern part of the coastal zone of the Lake Khubsugul, Mongolia. More than 100 photos were taken, 23 of them are chosen for the questionnaire.

The questionnaire is created on the web-site <http://www.jotform.com> and placed on the web-site <http://estetland.ucoz.org>. Questions in the questionnaire are divided into 2 blocks: data of the respondents and esthetic assessment of landscapes. For determination of quality of basic data in the questionnaire the following techniques were implemented: 1) there were two pictures of the same landscape used, 2) similar indicators "beauty" and "esthetics" were considered, 3) correlation coefficients between various characteristics of landscapes and their "esthetic" quality were calculated.

According to the questionnaire results an influence of some integrated properties of landscapes to their esthetic estimations for respondents is defined. The chosen landscape properties are ranged based on the importance of the esthetic assessment as follows: transformation, harmony, beauty, unicity, variety. It is shown that for the receiving authentic data on esthetic preferences of respondents it is necessary to use the principles of representative photographing of landscapes. These results supplement previous results achieved by a method of the structural analysis of esthetic qualities of landscapes. It allowed ranging the landscapes on an esthetic quality and creating the map of esthetic resources of landscapes on the basis of the landscape-typological map of the studied area.

キーワード: Representative photographing, indicators of data reliability, esthetic quality

Keywords: Representative photographing, indicators of data reliability, esthetic quality

Appreciation of informal urban greenspace by Japanese and Australian residents Appreciation of informal urban greenspace by Japanese and Australian residents

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As more people live and grow up in cities, we need a better understanding of our everyday urban environment and how we interact with the natural urban landscape. Prominent examples of this landscape like gardens and parks have been widely studied. However, just as we tend to overlook the grass growing out of a crack in the pavement, **informal urban greenspaces (IGS)** such as vacant lots, street or railway verges and river banks have not been comprehensively examined in terms of its quantity and distribution in cities, its characteristics, its biodiversity value, levels of use, and the benefits it provides to urban residents.

IGS is characterized by dominant spontaneous vegetation (often called weeds) and by not being formally recognized or managed for recreation, agriculture or conservation. As a result, it looks very different from designed, formal, intended greenspace. IGS exists in our everyday environment and may therefore challenge our aesthetic norms as well as our sense of order or may be interpreted as a lack of maintenance. But because it has no clear rules, no right way to use it or an intended form of design, this freedom from purpose creates the potential for a great variety of informal use: unstructured child play, casual exploring, guerilla gardening or quiet dog walks.

This study examines and compares informal urban greenspace in **Brisbane (Australia) and Sapporo (Japan)** to understand how it is related to appreciation of urban nature by residents. For this purpose a mail-back survey of residents in both cities was conducted, asking for knowledge and perception of IGS, use in the present or during childhood and general attitude towards urban nature. Additionally, the quantity, distribution and some ecological characteristics such as the IGS vegetation structure and bird diversity in the sample sites was examined. IGS in both cities was extensively documented using photography.

The results show that most respondents used IGS as a child or teenager and know about IGS in their neighborhoods. Residents see both positive and negative aspects of IGS; they praise its potential use and contribution to a greener urban landscape but sometimes deprecate its aesthetic value and associate IGS with low environmental quality. Most respondents regard urban nature as something intrinsically valuable independent from human evaluation. IGS also provides interesting examples of how private space can be reclaimed as public space, and vice versa (e.g. informal gardening on private parking lots and publicly owned river banks). This has implications for how we protect and manage greenspace in cities and how we provide for recreational opportunities as well as opportunities to encounter nature. Planners and ecologists need to account for these spaces in the future.

キーワード: urban nature, urban green space, landscape appreciation, child outdoor play, urban geography, cross-cultural comparison

Keywords: urban nature, urban green space, landscape appreciation, child outdoor play, urban geography, cross-cultural comparison

全球感覚：ライブモニタリングとアーカイブによる環境プロファイリング Sense of globe: Environmental profiling through real-time live monitoring and archiving experiences

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はじめに

人が日常身近に把握している最も身近なランドスケープが圍繞景観です。圍繞景観の要素の中で、太陽や月の運行による昼夜の繰り返し、日々の天候の様子や変化、植物や動物の生物季節などの自然の移ろいは、個人の原風景を形成しています。自然の移ろいを五感で把握し、季節や年を重ねながら様々な場面の圍繞景観が心の中に記憶され蓄積されているので、他の人々と環境体験を感覚的に共有し、相互に理解する際の基準となるのです。

一方、インターネットの普及とともに、遠く離れた自然の様子を映像と音からなる感性情報としてリアルタイムにネット配信することができるようになってきました。時折こうした遠隔の自然をリアルタイムで視聴していると、あたかも遠隔の自然の移ろいが身近な圍繞景観と一緒に感じられるようになっていくと仮説を立てています。そして地球上のあちこちの自然が、身近な景観のように感じられるようになると、地球環境時代の新たなランドスケープを構築するのではと考えています。その基盤にある環境情報技術がライブモニタリングとアーカイブです。

ライブモニタリングとアーカイブ

現在5地点でライブモニタリング・アーカイブを運用中ですが、本稿ではその中から、2011年3月11日の東日本大震災後に開始した東京大学東日本大震災に関する救援・復興支援登録プロジェクト「ひょうたん島ライブモニタリング」を説明します。

システムの概要:東京大学大気海洋研急所国際沿岸環境研究センター(岩手県大槌町赤浜)は、海岸から30m程の場所にあり、津波により最上階の3階まで被災しました。被災後にライブ音を配信するためのステレオマイク、温度、湿度、風向、風速、雨量を計測する複合気象センサー、海岸や海面と空の様子を撮影する2台のWebカメラを設置し、さらに海中にも可聴域のステレオマイクを設置し、これらの情報をインターネット経由で大学構内の研究室まで伝送し、研究室からはインターネット上にリアルタイム配信を開始しました。伝送した映像や音声、センサーデータはサーバに記録しながらアーカイブを作成し、さらにそのアーカイブをインターネットで公開しています。

ライブモニタリング表示ウェブページには、以下の情報を提示しています。

- 海岸と海面と大槌町のシンボルであるひょうたん島(蓬莱島)の様子(カメラ1)と大槌湾の空の様子(カメラ2)の映像データによる、最新の静止画像と、過去15分間を4秒の映像で表示する微速度映像
- 温度、湿度、雨量、風向、風速のデータ
- 大槌湾のひょうたん島東側の海中の水深1m, 5m, 10m, 15m, 20m, 25mの海水温データ
- 地上マイクライブ音 URL とハッシュタグ#otohama、リスナー数
- 海中マイクライブ音 URL とハッシュタグ#otohama2、リスナー数
- 映像アーカイブ URL
- 音生アーカイブ URL

気づき:「ひょうたん島ライブモニタリング」を開始してからは1年半程経過しています。音や映像などの感性情報とセンサー情報からなる環境情報をインターネット上に継続的な公開実践がようやく始まったばかりですが、気づきをいくつかご紹介します。

a. 復興の進展:2011年6月の深夜の録音には、シュレーゲルアオガエルの鳴き声が印象的です。昼間は自衛隊などの活動が聞こえたりもしますが、夜ともなると人の気配の全く無い沿岸センターからは、波音とカエルの声が印象的でした。

b.2011年10月7日22時の映像記録は、暗闇の月明かりがひょうたん島をサーチライトのように照らし出す幻想的な様子

c.2012年5月19日5時32分の映像記録は、朝靄に煙る大槌湾の海面で朝日を浴びるひょうたん島の様子は、一瞬ではあるが絵画のような美しさの風景でした。

環境プロファイリング

身近な自然にふれる日常生活を過しながら、遠方の自然様子をライブ映像やライブ音で見たり聞いたりするにつれて、身近な圍繞景観の一部に遠方のそれが融合していく。それは人が感覚的に捉えている環境が、空間的に拡張されることであり、月日の経過とともに時間的にも拡張されることである。

環境プロファイリングとは、インターネットで配信される自然環境情報のライブモニタリングに接しながら、身近

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な実環境と融合しながら、人々の記憶の中に蓄積されていく全球的な環境感覚だと考えている。

<http://cyberforest.nenv.k.u-tokyo.ac.jp/>

キーワード: ランドスケープ, サウンドスケープ, ライブモニタリング, アーカイブ, 環境プロファイリング, インターネット
Keywords: landscape, soundscape, live monitoring, archive, environmental profiling, internet