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REGIONAL ORIGINALITY IN STREETSCAPES
A CASE STUDY OF THE URBAN LANDSCAPING DISTRICT IN NAGASAKI,
JAPAN

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ABSTRACT

This study focuses on the efficacy and use of kansei (sensitivity) value creation for the construction of distinctive regional landscapes where man-made design elements construct a living space. This focus advances our objective of clarifying design relationships. Accordingly, we surveyed, analyzed and discussed the design elements of our regional case study, and looked at their efficacy and influence on the regional landscape and regional brand. As a result, we were able to draw up an index of ways to build project plans for landscape design elements that contribute to the construction of a regional brand.

Keywords: Streetscape, Regional Brand, Design Evaluation

INTRODUCTION

Japan has been thrust into the status of a mature society and because of reappraisals of the rigidly uniform national policy on city development that existed during the period of high economic growth, there is growing interest in designs that preserve the regional originality of Japan’s landscapes. In the fifteen years after 1989, there was close to a four-fold increase in the number of local governments that enacted landscape ordinances. Further, there has been an explosive increase in the number of resident-directed town planning groups, with an increase from 549 groups at the end of March 2000 to 15,734 groups at the end of September 2009. Resident participation in town planning groups has also accelerated. Now there is demand for resident-based, regionally original landscaping, with city residents playing the leading role. National policies

are being written that strengthen local autonomy and the tourist industry. It can be anticipated that there will be intensified competition among cities in the future. A city is not just its residents: it will be important to convey the charm and value of regional originality to a larger number of people. They will think, this is a “target that must be chosen.” The “end user’s” perspective on landscapes is very important, and city street space should convey regional originality and be available for common use.

RESEARCH OBJECTIVES

This study is concerned with the recognition and appreciation of “regional originality” in urban streetscapes. Its objective is to clarify the essence of “regional originality” by using survey analysis that employs the Quality Karte (Chart) evaluation and testing system. In addition, focus on the following points will advance research: 1.The relationship between end user demographics and evaluations of regional originality, 2. the clarification of the primary regional originality evaluation factors for streetscapes, 3.the relationship between position on landscapes and evaluation of regional originality, and 4.the relationship between individual evaluation of streetscapes and evaluation of regional originality. The results will be used to clarify the mechanisms for evaluating regional originality, and to offer proposals from the prospective of the effective use of regional originality during streetscape creation in future years.

METHODOLOGY

Streetscape stakeholders were divided into providers (administrators and people connected with

construction) and end users (city residents, tourists, etc.); streetscape evaluation tests were conducted using the Quality Karte (Chart) evaluation and testing system; and analysis, discussion and proposals were based on these results. The research was conducted in the 3 phases below:

1. The creation of landscape evaluation indicators
Quality Karte evaluation and test system material from the past were used to make 305 space-related and newly constructed evaluation indicators into a base. Indicators that were thought to have a strong possibility of influencing regional originality evaluations were extracted, and indicators were constructed for use in landscape evaluation tests.

2. Landscape evaluation tests
Using the constructed streetscape evaluation indicators as a base, streetscape evaluation tests were conducted for streetscapes that had been selected for a case study. For this study, a virtual landscape test was presented using Google Maps Street View as the stimulus, and this was used for evaluation.

3. Analysis and discussion
Multivariate analysis was used on the results of the landscape evaluation test in order to clarify value creation for regional originality. The following methods were used: 1.Independent verification clarified the relationship between the evaluation of regional originality and subject demographics. 2.Using quantification theory type 2 analysis, we extracted indicators that strongly influence regional

originality, compared their position, made a comparison with individual evaluation results, conducted a discussion of the cause and effect relationship of existing landscaping plans, and commented on the direction of future landscape planning.

4. A Summary of the Quality Karte Evaluation and Testing System

The Quality Karte evaluation and testing system is not an evaluation by a centralized core of technicians, designers and other experts. Three groups consisting of providers (designers, technicians, etc.), consigners (managers, businessmen, etc.), and end users use the same standards to create appraisal items that can make evaluations (the Quality Karte). The divergences generated by the evaluators' different positions become visible, and primary divergence factors are extracted. By constructing a method that makes it possible to specify solutions, this is a series of research activities that are useful for "creative endeavors."

STREETSCAPE EVALUATION TEST
THE CONSTRUCTION OF LANDSCAPE EVALUATION INDICATORS

305 new space-related evaluation indicators were constructed using material from the past. It was necessary to refine this number down to about 40 indicators for the test. At this point, we conducted a survey of literature related to regional originality and urban landscapes, and extracted evaluation

Table 1. Streetscape Evaluation Indicators

Evaluation Indicators that are Thought to be Related to Regional Originality	
1-1 A place with peace and serenity	5-1 It feels at one with nature
1-2 It's clean	5-2 The topography feels alive and brings out the charm of the spot
1-3 It feels comfortable	
1-4 A place that has been made to feel open	5-3 I feel the history of the area is considered
1-5 A place where it is easy to feel at home	5-4 The scenery makes me feel the harmony of old and new
2-1 Visitors all feel a special bond	
2-2 A nostalgic spot	5-5 Regional characteristics are adapted to modernity
2-3 I get a sense of the whole town	5-6 It creates an individualized landscape
2-4 It makes the case for environmental protection	6-1 Traditional techniques are skillfully incorporated into modern techniques
2-5 It shows the special appeal of Nagasaki	
3-1 The whole area feels unified	6-2 Traditional materials are skillfully revitalized
3-2 The scene gives me a sense of history and era	6-3 It has become the symbol of the region
3-3 I can (or may) feel the passage of time	6-4 Regional characteristics are cleverly expressed
3-4 It's lovely to walk around the area	6-5 It gives extra value to the region
3-5 It's a place that makes me imagine all sorts of things	6-6 Regional originality is taking form
4-1 It feels like something that deviates from the ordinary	7-1 It feels different from any other scenery
4-2. It's a lively spot	7-2 This project is different from anything else I've seen
4-3 It's a place full of surprises	7-3 It's an area with a mystical atmosphere
4-4 It feels romantic	7-4 It expresses Japan's traditional beauty



Dutch Slope Street



St. Paul Street



Kawabata Street



Shinchi Chinatown

Figure 1. Selecting Streets at the Nagasaki Urban Landscaping District

indicators that were thought to have an influence on regional originality.

SELECTING STREETS FOR THE TEST

This study conducted a landscape evaluation test as a case study of the Urban Landscaping District in Nagasaki, Japan. 70% of Nagasaki's municipal area is on hillside slopes, and the city is known for its unique topography and an individual cultural style with strong foreign influences. The city has 241 cultural treasures and it is a thriving tourist haven with 5.5 million visitors a year. Two areas within the city have received the top city-landscape prize and so forth, and both producers and end users value landscape originality. In addition, the city of Nagasaki has decided upon an urban landscape master plan and, with the goal of "strengthening the city's charm," is addressing the issue of a landscape administration that places importance on "landscaping to make places notable." These attributes make Nagasaki an ideal case study.

Four areas have been designated as the Nagasaki Urban Landscaping District. From these areas, this study has chosen Dutch Slope Street, St. Paul Street, Kawabata Street and Shinchi Chinatown as test sites. (Figure 1)

PROCEDURES FOR THE LANDSCAPE EVALUATION TEST

The test was conducted via Web questionnaires that made use of Google Maps Street View. We used a survey system that consisted of material from a series of Quality Karte studies.

Printed responses were used to guarantee sample size.

Test methodology consisted of a test route, such as Figure 2, and a landscape test that was conducted with Google Maps Street View. Results were entered onto evaluation sheets. This was repeated for the four streets and concluded with entries onto face sheets that contained subject demographics.

THE QUESTIONNAIRE

A nominal scale, pre-code, questionnaire format was used throughout. The evaluation sheet contained 35 evaluation indicators with the addition of the two combined items, "Experience or lack of experience with the test streets, and affiliation." These were thought to influence regional originality. The response format was a "yes" or "no" 2-choice, single response for experience and affiliation with the test streets, and an "agree," "agree somewhat,"



Figure 2. Test Route (Dutch Street)

“disagree,” “disagree somewhat” 4-choice, single response for landscape evaluation. The face sheet asked about the subject’s gender, age generation, position with respect to the streetscape, occupation, place of origin, place of residence, and awareness of regional originality.

SUBJECTS

There were 154 valid responses, of which 62 people were producers and 92 were end users. 32 people lived in Nagasaki City, 122 lived outside of the city, 31 grew up within Nagasaki City, and 123 grew up outside of the city.

TEST RESULTS

Producer test results were scored with 4 points for “agree,” moving down to 1 point for “disagree. The distinguishing feature was a high average score for streetscapes. Indicators with particularly high evaluations for Dutch Slope Street were: “It feels different from any other scenery,” “It feels comfortable,” and “Visitors all feel a special bond.” For St. Paul Street they were: “It feels at one with nature,” “A place where it is easy to feel at home,” and “A place that has been made to feel open.” For

Kawabata Street they were: “The whole area feels unified,” “A place where it is easy to feel at home” and “It gives extra value to the region.” For Shinchi Chinatown they were: “It feels comfortable,” “It feels like something that deviates from the ordinary,” and “It gives extra value to the region.”

PRIMARY REGIONAL ORIGINALITY EVALUATION FACTORS

ANALYTIC METHOD

Quantification theory type 2 is a statistical analysis method that can analyze the extent to which a qualitative item (external criteria) influences other qualitative items (explanatory variables). This study added the test results of the streetscape evaluation indicators, “creating regional originality” (external variables) to the separate, 34 evaluation indicators (explanatory variables), and divided the 36-item test results that included the test results concerning experience with streetscapes and affiliation, into the categories of producer and end user, and entered it. In order to make analysis easier, the 4-level scale was consolidated into a 2-level scale. “Agree” and “agree somewhat,” and “disagree” and “disagree somewhat” each became one category. Unless the correlation ratio from the analysis was low,

evaluation indicators with range values and partial correlation coefficient values that were both within the upper top 5 were extracted as “evaluation indicators with a strong influence on regional originality.” Among these, and depending on category quantity values, indicators that had a positive influence on regional originality were labeled and analyzed as “positive factors,” and indicators with a negative influence were labeled and analyzed as “negative factors.”

DUTCH SLOPE STREET

Analysis showed a correlation coefficient of 0.674 with the center axis, “agree,” at 0.4812 and “disagree” at -1.3807. Table 2 lists the evaluation indicators that are highly influential. Producers and end users agree that “This project is different from anything else I’ve seen” was a negative factor.

Table 2. Regional Originality Evaluation Factors for Dutch Slope Street

	Item	Range		Partial Correlation Coefficient		Category Quantity	
		order	number	order	number	1	2
Producer	I can (or may) feel the passage of time	1	1.2566	2	0.2979	-	1.0945
	Traditional techniques are skillfully incorporated into modern techniques	2	1.1189	1	0.3509	-	0.7760
	It feels different from any other scenery	3	0.7651	3	0.2633	0.2345	-0.5306
	It shows the special appeal of Nagasaki	4	0.7202	5	0.2285	0.1975	-0.5227
	This project is different from anything else I've seen	5	0.6966	6	0.2182	-	0.3258
End User	It's a lively spot	1	0.7842	2	0.3006	-	0.4688
	A place with peace and serenity	2	0.7675	1	0.3529	0.2086	-0.5589
	Regional characteristics are cleverly expressed	3	0.7266	4	0.2720	0.1659	-0.5808
	It feels like something that deviates from the ordinary	4	0.6034	3	0.2842	0.2033	-0.4001
	This project is different from anything else I've seen	5	0.5818	7	0.2486	-	0.3415

End users felt that the creation of a sense of peace and serenity, and a portrayal of life that deviates from the ordinary, would be welcome if a landscape design was enacted that could evaluate regional originality. In this sense, it can be said to be important and effective to produce a feeling of something that deviates from the ordinary that values historical design in landscape creation standards.

However, a landscape plan that responds to the negative factor “liveliness” and the positive factor “serenity” is insufficient. Landscape creation standards and scenic area districts have regulations that are lax with respect to making the city greener. In the future, it will be important to have end users evaluate regional originality. To do so, we must add

to existing schemes, and strengthen plans and rules that stress trees, planted areas, and other aspects of nature.

ST. PAUL STREET

The correlation coefficient was 0.9439 with the center axis, “agree,” at 0.8704 and “disagree” at -1.0569. As shown in Table 3, both producers and end users were strongly influenced by “It creates an individualized landscape.” Therefore, it is necessary to clarify and share the concept of “a feeling of individuality.” In addition, attention must be paid to the fact that “Traditional techniques are skillfully incorporated into modern techniques” was a negative factor for producers and a positive factor for end users. In the future, there is a dangerous possibility that end users will be completely unable to understand sterile landscape plans.

“It’s a place that makes me imagine all sorts of things” was a negative factor for end users. Because this is most likely the result of the standardized advertising regulations of the current plan, we hope that they continue to be in effect. Meanwhile, end ambiguous factor, so it must be clarified and included in the plan.

Table 3. Regional Originality Evaluation Factors for St. Paul Street

	Item	Range		Partial Correlation Coefficient		Category Quantity	
		order	number	order	number	1	2
Producer	Traditional techniques are skillfully incorporated into modern techniques	1	1.2925	4	0.4114	-	0.5212
	It creates an individualized landscape	2	0.8689	1	0.5895	0.4064	-
	Visitors all feel a special bond	3	0.8274	2	0.5444	-	0.4404
	The topography feels alive and brings out the charm of the spot	4	0.6127	5	0.3753	-	0.3775
	A place that has been made to feel open	5	0.5964	3	0.4180	0.1539	-
End User	It creates an individualized landscape	1	0.9400	1	0.4612	0.3270	-
	Regional characteristics are cleverly expressed	2	0.9032	2	0.4219	0.3534	-
	Traditional techniques are skillfully incorporated into modern techniques	3	0.8079	5	0.2526	0.3864	-
	Traditional materials are skillfully revitalized	4	0.7890	4	0.2776	-	0.4117
	It's a place that makes me imagine all sorts of things	5	0.7311	3	0.3625	-	0.4212

Further, important historical context is provided by the fact that this area was the atomic bomb epicenter. However, there was little influence by the indicator about what was thought to be about “consecrated ground,” as prescribed by the landscaping plan. If the plan is to be fulfilled, then landscaping must be created so that the indicator “It’s an area with a mystical atmosphere” becomes a positive factor.

KAWABATA STREET

The correlation coefficient was 0.9439 with the center axis, “agree,” at 0.8704 and “disagree” at -1.0569. As shown in Table 3, both producers and end users were strongly influenced by “It creates an individualized landscape.” Therefore, it is necessary to clarify and share the concept of “a feeling of individuality.” In addition, attention must be paid to the fact that “Traditional techniques are skillfully incorporated into modern techniques” was a negative factor for producers and a positive factor for end users. In the future, there is a dangerous possibility that end users will be completely unable

Table 4. Regional Originality Evaluation Factors for Kawabata Street

	Item	Range		Partial Correlation Coefficient		Category Quantity	
		order	number	order	number	1	2
Producer	I can (or may) feel the passage of time	1	1.218 5	4	0.309 3	0.3341	-
	It feels comfortable	2	1.006 8	2	0.322 9	-	0.6820
	A place with peace and serenity	3	0.899 1	1	0.329 2	0.2900	-
	It feels romantic	5	0.790 8	3	0.311 1	-	0.4847
	The whole area feels unified	6	0.778 7	5	0.298 6	-	0.6155
End User	It feels different from any other scenery	1	1.125 3	1	0.448 1	0.3339	-
	It feels romantic	2	0.909 4	7	0.278 0	0.3198	-
	The scenery makes me feel the harmony of old and new	3	0.827 0	2	0.385 5	0.2636	-
	It's an area with a mystical atmosphere	4	0.803 0	3	0.360 9	-	0.4677
	Visitors all feel a special bond	5	0.781 7	4	0.334 2	-	0.5670

End user evaluations show the strong influence of “It feels romantic.” Therefore, it seems effective to create more harmony between the stone bridge and river landscape factors. The factor, “The scenery makes me feel the harmony of old and new” was also a strong influence, which raises the idea of designating the left bank as a “city zone” in the landscaping plan and allowing urbanization. “It feels romantic” is not limited to simple reproduction of history, and more thought must be put into this staging. The present situation is such that these evaluation indicators are not being addressed by effective landscape plans and designs. Using these evaluation indicators as potential strengths, new mechanisms and productions will be necessary for lighting plans and building façade material. Because “It’s an area with a mystical atmosphere” was a negative factor, scrupulous attention must be paid to production methods. “Visitors all feel a special bond” was a negative factor, but this is thought to

be due to good, unobstructed views of the river area within the cramped Nagasaki created by the Nakashima River. The D/H will be 2 if construction is to go the maximum height allowed with the height regulations in the landscaping plan, and this will be the same value as the open Baroque-era streetscape. And, with respect to landscape design, the protective walls of the wharf use the open apertures of the balustrade on the stone bridge as a motif and create a design with high permeability. This is a good example of the effective use of traditional design in urban historic preservation. In the future, it is to be hoped that there is a continuation of landscape design that skillfully harmonizes such plans and designs.

SHINCHI CHINATOWN

Analysis showed a correlation coefficient of 0.8519 with the center axis, “agree,” at 0.5127 and “disagree” at -1.6206.

Position comparison of the analysis in Table 5 shows that both producer and end user agree on “It’s a lively spot.” “It has become the symbol of the region” was a negative factor for producers and a positive factor for end users, which means that producers must understand end users’ values. One could say that when both end user and producer agree that “It’s a lively spot,” this means that there is a strong dimension that is naturally caused by Chinatown’s culture, and not the result of intentional landscaping. At present, there are no particular standards in the Chinatown landscaping plan that concern land use in the one-story section.

Table 5. Regional Originality Evaluation Factors for SHINCHI CHINATAWN

	Item	Range		Partial Correlation Coefficient		Category Quantity	
		order	number	order	number	1	2
Producer	It's a lively spot	1	1.187 4	2	0.517 5	0.3830	-0.8044
	It creates an individualized landscape	2	1.157 9	5	0.317 0	0.3922	-0.7657
	Regional characteristics are cleverly expressed	3	1.149 0	3	0.484 9	0.2595	-0.8896
	A place where it is easy to feel at home	4	1.079 2	1	0.520 0	0.2263	-0.8529
	It has become the symbol of the region	5	1.021 1	7	0.301 3	-0.3129	0.7082
End User	It has become the symbol of the region	1	1.444 3	1	0.611 8	0.5181	-0.9262
	It shows the special appeal of Nagasaki	2	0.571 3	3	0.362 2	0.1987	-0.3726
	It's a place that makes me imagine all sorts of things	3	0.526 5	2	0.389 2	-0.1946	0.3319
	It's clean	4	0.464 6	4	0.260 8	0.1717	-0.2929
	It's a lively spot	5	0.405 2	5	0.227 0	0.1321	-0.2731

However, recently, one sees empty stores in Chinatown and land that is now used for paid parking. The loss of liveliness is none other than the loss of regional originality. In the future, these concerns must be kept in mind and the time is coming for directed planning.

“It shows the special appeal of Nagasaki” and “It has become the symbol of the region” are indicators that were not used for other streets. It would be effective to make use of them as advertising and branding strategies.

“It’s a place that makes me imagine all sorts of things” was a negative indicator, which, like the indicator, “It’s clean,” is different from the impression of Chinatown as diverse and stimulating. It is likely that Chinatown is animated because of the landscaping plan’s regulations about advertising materials and façade design, but also as a result of the creation of an orderly landscape.

CONCLUSIONS

Regional originality evaluations and subject demographics: The presence or absence of having lived in Nagasaki had a clear relation to evaluations in regards to St. Paul Street. For tourists, one could say that it was not just a tourist site; it was possible to convey regional originality to tourists by letting them experience scenes with people.

Tables 2-5 show indicators that strongly influenced regional originality evaluations, but for the streets in conjunction, there were different results for streetscape characteristics and for indicators that strongly influenced regional originality. The landscaping that mixed these up should be avoided because it was not directly connected to evaluations of regional originality. In addition, results differed for producers and end users. Because of this, producers must create landscapes from the point of view of the end user. For historical streetscapes in particular, there are also indicators that have a strong influence that is distinct from history. With respect to the end user, it is advisable that landscaping be done with consideration of these indicators if there are to be more effective appeals for regional originality.

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