CHARACTERISTICS OF EAVES ON APPROPRIATION IN THE APPROACH OF CONTEMPORARY JAPANESE PUBLIC BUILDINGS

This study aims to clarify the characteristics of eaves on appropriation in the approach of contemporary Japanese public buildings. Eaves of a pitched roof are characterized by different inclinations of nokkiura and the roof surface, projecting several domains on the adjacent space. The relation between this projection and the approach is studied. First, through different eave configurations, three types of projected spatial articulation are defined. Second, the relation between this projection and the approach is analyzed and patterns are established. By comparing these patterns, the characteristics of eaves on appropriation in the approach of contemporary Japanese public buildings are clarified.

Keywords: Eaves, Appropriation, Approach, Public Buildings, Japanese Contemporary Architecture

1. Introduction
1.1 Background and Aim of Study

Deep projecting eaves as the edge of a large roof, known from temples and shrines, are one of the most significant expression in traditional Japanese architecture. Initially serving as a device to protect the wooden structure from precipitation and sun exposure, Japanese carpentry developed sophisticated techniques to project and decorate eaves incorporating environmental concerns as well as representative purposes. Hence, eaves have become a characteristic element that refers to Japanese architectural tradition.

Against the background of a new modernization that began after World War II, Japanese architects attempted to continue tradition in their design practices. In the postwar period, the large, monumental roof seemed to be adequate neither from a symbolic viewpoint nor considering the manifestations of modern architecture and consequently almost disappeared in public buildings. On the other hand, deep projecting eaves that extend the horizontal line of a flat roof became the traditional expression relevant to apply for public buildings addressing representative demands.1

Recently, eaves that extend from a pitched roof were rediscovered rather as an architectural element that addresses representative purposes but more environmental concerns by cutting direct sun and protecting the structure from precipitation. In addition, another value emerges by reinterpreting eaves in contemporary Japanese architecture, which takes form as the hypothesis of this study, that eaves gestures possess the ability to appropriate public space.

While approaching a building with eaves, visitors experience changing scenes affected by eaves. Through different inclinations of nokkiura and the roof surface, eaves project several domains on the adjacent space experienced through the approach. By altering the articulation and depth of domains, public space is appropriated in different ways. In the dense, highly developed urban context of contemporary Japanese cities, the appropriation of public space through eaves seems even more crucial to examine to demonstrate this hidden value of a traditional element.

Therefore, this study aims to clarify the characteristics of eaves appropriating the approach area of public buildings in contemporary Japan.

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1.2 Previous Studies and Relevancy

In a series of studies, Yasuhara and Iibuchi discuss the role of eaves and the roof in the perception of traditional Japanese architecture. The concept “Domain of Eaves” is introduced as an area that is affected by nokiura (Fig.1). The boundary of this domain is the point where the projection of nokiura intersects the eye level of the visitor. In a first paper, as an example of traditional Japanese architecture, the sequence of views observed when approaching the Sai-in (West Compound) of Horyu-ji from the Nandaimon (South Gate) is studied. A second paper, the concept is applied to the tea ceremony house. Psychological changes in a visitor at the transition from outside to the inside of the domain of eaves are studied.

To conceive eaves as an element in the composition of the façade, that projects beyond the building’s footprint towards the approach state an interesting consideration. It achieves another relevance in the contemporary context and with buildings open to the public. Responding to the present-day challenges and conditions, the concept is reframed, extended, and applied to eaves of contemporary Japanese public buildings.

From the viewpoint of approach and surrounding environment, studies by Terauchi and Sakamoto demonstrate the relation between the building and the approach space, as well as the building and its surroundings. A study by Konno and Tsukamoto demonstrates this relation from the viewpoint of loggia space. In the context of studies about the Japanese detached house, Tsukamoto introduces the term “articulated exterior” as an exterior space affected by the building.

Considerations about spatial articulation, the relationship between the building and approach, as well as between the building and surroundings become relevant in this study. The unique character is based on the hypothesis, that eaves gestures of contemporary Japanese public buildings possess the ability to appropriate public space.

1.3 Domains obtained by Eaves

To discuss this viewpoint in the contemporary context, Yasuhara’s concept is reframed and extended (Fig.2). Four domains obtained by eaves are defined. The term nokishita is established in the Japanese language. It defines the exterior space beneath the eaves. nokisoto is a new term introduced in this study. It defines the exterior space excluding nokishita. Depending on differences in the projection of nokiura and the roof surface, nokisoto is subdivided into three domains: Within nokisoto1, nokiura only is visible; within nokisoto2, nokiura and the roof surface are visible; and within nokisoto3, the roof surface only is visible. The point where the visitor enters a domain is defined as transition point. Three transition points exist: T1, nokishita, T1, and T2. Domains and transition points are defined from the perspective of a visitor on eye level.

1.4 Principles: Relation between Eaves and Approach

All domains obtained by eaves are exterior space: nokishita within the building’s footprint: nokisoto, 2, and 3 outside this boundary. This research is developed from the hypothesis, that eaves appropriate public space experienced through the approach. Approach is conceived as the sequence composed of paved circulation segments within a certain physical setting differentiated into adjacent and distant. The relation between eaves projecting a particular spatial articulation and approach is established as the principle of this study (Fig.3).

1.5 Selection of Samples

As for the analysis, contemporary Japanese public buildings in an urban context, of which the main roof can be identified as one of the basic roof types: kirizuma (gabled), yosemune (hipped), irimoya (gable-hipped), hogyo (square pyramidal), and shed roof were selected. Consequently, eaves repetitive in section either spin around the entire volume, project diemetrically from it, or in one direction. In this research, only eaves facing the approach are considered. The
building is approached from the eaves side and entered at the transition point TP’nokishita’. In addition, eaves cantilever more than 1 ken’.” Based on these conditions, 81 samples were found (Table 9). All samples were built after World War II and published in the periodical *shinkenchiku* magazine from 1953 to 2021. Collected information is based on sections, plans, site plans, and photos from this source. In addition, a significant number of works have been visited by the author.

## 2. Methodology

Based on the principle of eaves projecting a particular spatial articulation which is experienced through the approach, this study is developed as followed:

First, elements of eave configuration that determine a particular spatial articulation, as well as those that compose the approach are defined (Ch.2.1). Second, all samples are diagrammed in section to clarify eave configuration in order to establish types of spatial articulation (Ch.3.1). Third, all samples are diagrammed in plan with this projection overlayed. Analyzing the relation between spatial articulation and approach, patterns of eaves on appropriation of the approach are established (Ch.3.2). By comparing these patterns, the characteristics of eaves on appropriation in the approach of contemporary Japanese public buildings are clarified (Ch.4).

### 2.1 Elements

Eave configuration that determines a particular spatial articulation is defined by three elements: First, through the Relation between *nokisoto* and roof surface (Table 1) as of equally inclined (e=0, r=0), inclined-inclined (e>0, r>0), horizontal-inclined (e=0, r>0), or opposed-inclined (e<0, r<0): second, through Vertical Disposition (Table 2) as stacked or ordinary; and third, through Adjacent Topography (Table 3) as ascending, descending, or flat.

Approach is defined by five elements. Considerations begin with the Division of *nokishita* through pillars (Table 4). Circulation beneath and Access towards *nokishita* (Table 5) is defined as either unrestricted/unrestricted, unrestricted/restricted, or restricted/restricted. Depending on the access towards *nokishita*, eaves are facing an approach sequence composed of circulation segments (Table 6) defined as either unrestricted or restricted as frontal, oblique, or parallel. Physical Setting is distinguished between adjacent and distant. Adjacent Physical Setting (Table 7) is defined as either open, enclosed, or as a street. Distant Physical Setting (Table 8) is defined as either buildings, trees/forest, or water surface.

For instance, eaves of sample No.79 (Fig.4) show an equally-inclined relation between nokisoto and the roof surface with a stacked vertical disposition. The adjacent topography is flat. *nokisita*, *nokisoto*1, 2, and 3 occur as domains and TP’nokishita’, TP1, and TP2 as transition points. Circulation beneath and access towards *nokishita* are unrestricted. The approach sequence is composed of an unrestricted segment followed by a parallel. Eaves are facing an open adjacent open space and a water surface in the distance.

### 2.2 Overview of Samples

All samples are examined through this methodology (Table 9). Most of the eaves show an equally inclined (49) or inclined-inclined (39) relation between *nokisoto* and the roof surface, followed by a smaller number of horizontal-inclined (16), and a small number of an opposed-inclined relation (4). Works with an ordinary vertical disposition (65) predominate those with stacked eaves (16). Most of the eaves are facing towards a flat adjacent topography. The number of eaves facing an ascending topography is small (5), and eaves facing a descending topography are rare (1). Works, of which *nokishita* is divided through pillars are less (33) than without a division (48). In most works, the circulation beneath *nokishita* is unrestricted (63) although restricted in access (48). A frontal approach predominates (29), followed by an unrestricted (22), parallel (16), and oblique approach (14). The adjacent physical setting tends to be open (48). Eaves facing an enclosed adjacent physical setting (22) are followed by eaves facing a street (11). As of the distant physical setting, eaves are mostly facing towards buildings (59), followed by a smaller number facing trees, or a forest (15), and a small number facing a water surface (7).

### 3. Articulation and Appropriation through Eaves

In this chapter, the relationship between eaves projecting a particular spatial articulation and the approach is examined. Through the analysis in section, three types of spatial articulation are established. The plan, which diagrams the approach, is then overlayed.

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"Table 1 Relation between nokisoto and roof surface"

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<thead>
<tr>
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"Table 2 Vert. Disp."

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<td>de</td>
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<td>5</td>
<td>1</td>
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"Table 5 Circulation/Access nokishita"

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"Table 6 Circulation Segments"

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"Table 7 Adjacent Physical Setting"

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<td>59</td>
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"Table 8 Distant Physical Setting"

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</tbody>
</table>

"Fig.4 Analysis Example No. 79"
### 3.1 Types of spatial Articulation projected by Eaves

All samples consist of at least two domains: nokishita and nokisotol. Depending on eave configuration, three particular types of projected spatial articulation are established (Table 10):

Type A (Pattern ① ② ③) is missing nokisotol2. Domains occur as follows: nokishita, nokisotol1, and 3. The distinctive transition point (①) is TP. This spatial articulation occurs through three configurations: First, through an inclination-relation between nokishita and roof surface; second, through an inclined-inclined relation of which the difference can be neglected; and third, through a stacked vertical disposition of an equally inclined relation of which the extensions of upper and lower eaves intersect at TP1.

Type B (Pattern ④ ⑤ ⑥) is missing nokisotol3. The entire exterior space is covered by nokisotol2. Domains occur as follows: nokishita, nokisotol1, and 2. The distinctive transition point is TP1. This spatial articulation occurs through three configurations: First, through a horizontal-inclined relation between nokishita and roof surface; second, through an opposed-inclined relation; and third, through a stacked vertical disposition of a horizontal-inclined and an opposed-inclined relation between nokishita and roof surface. Although the sight of the upper roof is lost, the lower roof surface remains visible. In this case, it is not distinguished between lower and upper eaves and roofs. nokishita of the upper eaves, as well as the lower roof surface, remain visible. Regardless of the vertical disposition, this is defined as nokisotol2.

Type C (Pattern ⑦ ⑧ ⑨ ⑩ is complete. All domains occur: nokishita, nokisotol1, 2, and 3 as well as two distinct transition points: TP1 and TP2. This spatial articulation occurs through three configurations: First, through an inclined-inclined relation between nokishita and roof surface; second, through a horizontal-inclined relation in combination with a descending adjacent topography; and third, through a stacked vertical disposition of either an equally inclined relation or an inclined-inclined relation between nokishita and roof surface. Although the sight of the upper roof surface is lost, the lower roof surface remains visible. In this case, it is not distinguished between upper and lower eaves and roofs. nokishita of the upper eaves, as well as the lower roof surface, remain visible. Regardless of the vertical disposition, this is defined as nokishita.

#### 3.2 Pattern of Eaves on Appropriation of Roofs

Analyzing the relation between eaves projecting a particular spatial articulation and the approach diagrammed in plan, patterns of eaves on appropriation of the approach are established (Table 11):
Table 11: Pattern of Eaves on Appropriation of the Approach

<table>
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<tr>
<th>No.</th>
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<th>3 Domains (nokishita, nokisoto1, nokisoto3)</th>
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<td>Pattern</td>
<td>3 Domains (nokishita, nokisoto1, nokisoto3)</td>
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<td>Pattern</td>
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<td>3 Domains (nokishita, nokisoto1, nokisoto3)</td>
<td>3 Domains (nokishita, nokisoto1, nokisoto3)</td>
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<td>3</td>
<td>Pattern</td>
<td>3 Domains (nokishita, nokisoto1, nokisoto3)</td>
<td>3 Domains (nokishita, nokisoto1, nokisoto3)</td>
<td>3 Domains (nokishita, nokisoto1, nokisoto3)</td>
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<td>4</td>
<td>Pattern</td>
<td>3 Domains (nokishita, nokisoto1, nokisoto3)</td>
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<td>3 Domains (nokishita, nokisoto1, nokisoto3)</td>
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<td>5</td>
<td>Pattern</td>
<td>3 Domains (nokishita, nokisoto1, nokisoto3)</td>
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<td>6</td>
<td>Pattern</td>
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<td>7</td>
<td>Pattern</td>
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<td>Pattern</td>
<td>3 Domains (nokishita, nokisoto1, nokisoto3)</td>
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</tr>
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Notes:
- Drawings are scaled 1:5000.
- Explanations are No. 13, 14, and 36 as stated 1:1000.
- (1) indicates a spatial appropriation that is near with the boundary of the property.
In Pattern ① nokisoto1 divides the adjacent circulation segment. In ①a and ①b this segment is restricted as either frontal or oblique. Eaves in ①a show an ordinary vertical disposition, whereas eaves in ①b are stacked. nokishita is divided through pillars. There is a tendency that the samples in ①a are surrounded by buildings in the distance, whereas the adjacent setting shows an equal amount of open and enclosed spaces. Samples of ①b are approached through an enclosed garden, surrounded by trees in the distance. Circulation beneath and access towards nokishita in ①c is unrestricted. Accordingly, the adjacent circulation segment continues unrestricted although divided by nokisoto1. Buildings are approached through an urban forest before reaching the open adjacent space.

In Pattern ② nokisoto1 covers the adjacent circulation segment and is congruent with the boundary of the property. In ②a this segment is restricted as either frontal or oblique, whereas in ②b it is unrestricted. In both pattern, buildings are approached from an adjacent open space. In ②c and ②d, nokisoto1 exceeds the boundary of the property, covering a broad area within the urban fabric. In ②x the approach is oblique, whereas in ②b it is unrestricted from an open plaza which is surrounded by buildings in the distance.

In Pattern ③ the building is approached parallel towards the entrance, which is conceived as the absence of distance. In ③a the parallel circulation segment is not covered by nokisoto1, whereas in ③b it is covered. Samples of Pattern ③ are located within a dense urban fabric.

In Pattern ④ nokisoto1 divides the approach although through a horizontal inclination of nokiura · nokisoto2 affects the entire surroundings. In ④a buildings are approached frontal from a rather enclosed space, whereas in ④b they are approached from an open plaza with trees located within the urban fabric.

In Pattern ⑤ nokisoto1 covers the adjacent circulation segment and is congruent with the boundary of the property. nokisoto2 is infinite and affects the surroundings. In ⑤a buildings are approached oblique, whereas in ⑤b they are approached from an open plaza located in a rather green environment.

In Pattern ⑥ the approach is parallel towards the entrance. In ⑥a this parallel approach comes from an open setting and is not covered by nokisoto1, whereas in ⑥b the parallel circulation segment is covered. A similar condition is identified in ⑥c, with nokisoto1 covering the parallel circulation segment. However, eaves are stacked and nokishita is divided through pillars. In all samples of Pattern ⑥ nokisoto2 is infinite and affects the surrounded setting.

In Pattern ⑦ the inclination of nokiura is opposed resulting in an infinite nokisoto2 that strongly affects the surroundings. In ⑦a nokisoto1 covers the frontal circulation segment congruently. Stacked eaves in ⑦b are facing an open plaza, which is congruently covered by nokisoto1. In ⑦c nokisoto1 exceeds the boundary of the property, covering a broad area within the urban fabric. All buildings of Pattern ⑦ are approached from an open adjacent space.

In Pattern ⑧ the complete spatial articulation occurs through a horizontal inclination of nokiura in combination with a descending topography. The frontal approach is divided by nokisoto1 but covered by nokisoto2 which is congruent with the boundary of the property. The building is approached through a narrow, enclosed path, flanked with trees, and located in a dense urban fabric.

In Pattern ⑨ the approach is divided by nokisoto1 and 2. Eaves in ⑨a show an ordinary vertical disposition. All samples are approached frontal through an enclosed space surrounded by buildings in the distance. Eaves in ⑨b are stacked and the approach is prolonged through an oblique circulation.

In Pattern ⑩ the approach is divided by nokisoto1, but covered by nokisoto2 which is congruent with the boundary of the property. In ⑩a buildings are approached frontal through an open setting within the urban fabric. In ⑩b this open setting is a plaza allowing an approach from several directions. A similar condition is identified in ⑩c, although the complete spatial articulation occurs through a stacked vertical disposition. Eaves are facing towards the sea in the distance.

In Pattern ⑪ the approach sequence is composed of at least two circulation segments. In ⑪a both segments are oblique. Each segment is divided: The first by nokisoto1, the second by nokisoto2. The building is approached through an enclosed garden-like space with trees surrounded by buildings in the distance. In ⑪b the approach sequence is composed of an unrestricted and restricted segment. Each segment is congruently covered: The first by nokisoto1, the second by nokisoto2. Trees on the adjacent space hide the view towards the building while moving in. Pattern ⑪c shows a similar condition, although eaves are stacked and nokishita is divided through pillars.

In Pattern ⑫ buildings are approached from a street that runs parallel towards the entrance and is located in a dense urban fabric. In ⑫a the parallel circulation segment is covered by nokisoto2, but not by nokisoto1. In ⑫b and ⑫c, this parallel circulation segment is covered by nokisoto2 and 1. Eaves in ⑫b show an ordinary vertical configuration, whereas eaves in ⑫c are stacked.

3.3 Chronological Mapping of Pattern

By mapping the pattern established in Chapter 3.2 chronologically, several tendencies occur. Some pattern exist only within a limited period. Regarding the three types of spatial articulation, an overall statement is possible (Fig.5):

Type A, which is composed of the three domains nokishita, nokisoto1, and 3, occurs consistently throughout the timeline from around
1970, especially pattern ③a. Within type A, three pattern occur only in a limited period: Pattern ②b in the late 1970s; pattern ②c in the mid-1980s; and pattern ③a at the beginning of the 2010s.

Type B, which is composed of the three domains nokishita, nokisotol, and ②, occurs in two peaks: The first peak emerges in the 1990s and a second peak emerges in the 2010s. Within type B, one pattern occurs only in a limited period: Pattern ③c before 1980.

Type C which is complete, and composed of all domains as of nokishita, nokisotol, ②, and ③, show similar tendencies with two peak periods slightly earlier than the peaks of type B: The first peak is beginning in the 1980s and the second peak is beginning in the mid-2000s. Within type C, four pattern occur only in a limited period: Pattern ③a in the 1980s; pattern ③b in the late 1980s; pattern ③a in the early 2010s; and pattern ③c throughout the 2010s.

### 4. Characteristics of Eaves on Appropriation in the Approach

To clarify the characteristics of eaves on appropriation in the approach of contemporary Japanese public buildings, the pattern established in Chapter 3.2, are positioned within a matrix of two axes: On a horizontal axis nokisotol in relation with the property boundary and on a vertical axis a reorganization of the types of spatial articulation. nokisotol occurs with all three types and hence becomes most relevant in the relationship with the property boundary. It is distinguished whether it steps back, touches, or exceeds this boundary. To consider nokisotol individually allows enhancing the differences of spatial articulation types. Type A (nokisotol: x | nokisoto2: x | nokisoto3: x) is opposed by Type B (nokisotol: x | nokisoto2: x | nokisoto3: x).

Type C (nokisotol: o | nokisoto2: o | nokisoto3: o) is composed of nokisotol and ③. Hence nokisotol is finite and has the characteristics of nokisotol: Either nokisotol steps back, touches, or exceeds the property boundary. Within this matrix the characteristics of eaves spread between a soft and a strong appropriation of public space.

Beginning with the spatial articulation type A, which is missing nokisotol, DIVISION of a physical setting states the largest group of samples. Pattern ③a, ③b, ③c, and ③d belong to this characteristic. The transition towards nokisotol and nokishita in the approach is delayed. nokishita does not claim the adjacent physical setting. Consequently, nokishita appears as a dimmed space protected from the surroundings. This characteristic emphasizes the experience of approach within a peaceful physical setting such as a garden or urban park. Eaves create a gesture that behaves humbly towards its surroundings.

Continuing the horizontal axis, COVER of the adjacent space states another characteristic of eaves appropriation of public space to which pattern ③a and ③b belong. nokisotol touches the property boundary. This characteristic emphasizes the transition between different physical settings within and outside the property boundary. nokisotol claims the adjacent space and provides the visitor a feeling of inclusion before reaching nokishita. Eaves create an inviting gesture that articulates domains congruent with the physical settings.

In contrast to the preceding characteristics, where nokisotol remains within the boundary of the property, a strong characteristic appears, when nokisotol exceeds this boundary and claims a broad
area. Visitors enter nokisoto, which is blurred in the urban fabric, early in the approach—often without noticing. The property boundary loses relevance. An inviting eaves gesture reaches far into the public space absorbing the network of sidewalks and streets. While “division” is described as humble and “cover” as inviting, this characteristic, to which pattern $\varnothing c$, $\varnothing d$, and $\varnothing b$ belong, is described as assertive and identified as INTEGRATION of adjacent spaces.

Shifting towards the vertical axis of the framework, the main characteristics DIVISION, COVER, and INTEGRATION alter through a different type of spatial articulation. Eaves of type B strongly affect the approach through an infinite nokisoto2, which modifies the main characteristic established by nokisoto1. Three subtypes emerge: BOUNDLESS DIVISION to which pattern $\varnothing a$ and $\varnothing b$ belong; BOUNDLESS COVER to which pattern $\varnothing a$, $\varnothing b$, $\varnothing a$, $\varnothing b$, and $\varnothing b$ belong; and BOUNDLESS INTEGRATION, to which Pattern $\varnothing b$, $\varnothing c$, and $\varnothing c$ belong. The latter characteristic exemplifies the strongest possible appropriation of public space.

Between the two contrasting characteristics which significantly differ through a twisted occurrence of nokisoto2 or nokisoto3, spatial articulation type C possesses the ability to either repeat or combine two of the three main characteristics. Through repetition of characteristics, eaves provide the visitor a gradual approach towards the building. Pattern $\varnothing a$, $\varnothing b$, and $\varnothing c$ belong to REPETITIVE DIVISION. Pattern $\varnothing b$ and $\varnothing c$ belong to REPETITIVE COVER. Pattern of $\varnothing b$ and $\varnothing c$ belong to REPETITIVE INTEGRATION.

Strong characteristics appear through the combination of two main characteristics. One characteristic combines DIVISION and COVER to which pattern $\varnothing a$, $\varnothing b$, $\varnothing b$, and $\varnothing c$ belong. The adjacent space is covered by nokisoto2 while divided by nokisoto1. This dialectic prepares an approach, where visitors experience inclusion through an inviting gesture caused by nokisoto2 before reaching nokishta. At the same time, the physical setting is emphasized through the late entrance to nokisoto1. A humble gesture is combined with an inviting gesture of eaves.

Another characteristic combines COVER and APPROPRIATION to which pattern $\varnothing a$ belongs. nokisoto2 reaches far beyond the property boundary into the public space of the urban fabric. On the contrary, nokisoto1 emphasizes the property boundary accompanied with the transition between different physical settings as of a lively street and a peaceful, protected garden.

5. Conclusion

The characteristics of eaves on appropriation in the approach of contemporary Japanese public buildings were examined. Eaves of a pitched roof are characterized by different inclinations of nokiura and roof surface. Through the extension of both inclinations, four domains are possible to be projected on the adjacent space: nokishta, as well as nokisoto1, 2, and 3 (Ch.1.3). Those domains possess the ability to articulate the adjacent exterior space and appropriate public space. The relation between eaves projecting a spatial articulation and the approach was established as the principle of this study (Ch.1.4). Three types of spatial articulation were identified (Ch.3.1): Type A is composed of nokishta, nokisoto1, and 3. Type B is composed of nokishta, nokisoto1, and 2. Type C is composed of nokishita, nokisoto1, 2, and 3. Analyzing the relation between spatial articulation and approach, patterns of eaves on appropriation of approach were established (Ch.3.2). By comparing these patterns while considering the boundary of the property, three main characteristics of eaves on appropriation in the approach of contemporary Japanese public buildings were identified (Ch.4):

DIVISION of a physical setting: nokisoto divides the adjacent physical setting and nokiura is seen late while approaching the building. This characteristic emphasizes the experience of approach within a peaceful surrounding like a garden, or a park.

COVER of the adjacent space: nokisoto1 covers the adjacent space and the projection of nokiura is equal with the boundary of the property. In the approach, the visitor experiences a feeling of inclusion through an inviting gesture before reaching nokishta. This characteristic of eaves prepares public space for conglomeration.

INTEGRATION of adjacent spaces: nokisoto1 exceeds the boundary of the property and reaches far into the urban fabric. The visitor experiences a condition strongly affected by seeing nokiura throughout the entire approach. This characteristic is described as most assertive.

The three main characteristics alter through a different type of spatial articulation. Type B creates BOUNDLESS DIVISION, COVER, or INTEGRATION. Type C either creates REPETITIVE DIVISION, COVER, or INTEGRATION: or it combines DIVISION+COVER or COVER+INTEGRATION.

The classification into three main and eight minor characteristics demonstrates the potential in reinterpreting the traditional element eaves on appropriation in the approach of contemporary Japanese public buildings and therefore strongly affect public space through architectural design.

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Notes
*1) Through a survey on eaves in the periodically shinkenchiku magazine, a high number of works in the 1950s and 1960s show the expression of horizontal eaves.
*2) 突き上げ is defined as the underside of the eaves.
*3) Definitions of the building's footprint differ. This study describes the area which is covered by the roof.
*4) The eye level refers to that of the author (165cm).
*5) Kishida defines the four basic roof types as gabled, hipped, gable-hipped, and square pyramidal; Nousaku defines the four basic roof types as shed, gabled, hipped, and square pyramidal. This research combines both perspectives.
*6) ken is a traditional Japanese unit of length, equal to six Japanese feet which are about 1.8m.
*7) Numbers refer to all eaves, counting multiple if stacked.
*8) Numbers refer to the adjacent circulation segment.
*9) TP1 and TP2 are defined as distinctive transition points.
Summary in English

This study aims to clarify the characteristics of eaves on appropriation in the approach of contemporary Japanese public buildings. Eaves of a pitched roof are characterized by different inclinations of nokiura and the roof surface. Through the extension of both, domains are projected on the adjacent space defined as nokishita, nokisoto1, nokisoto2, and nokisoto3. The plan, which diagrams the circulation segments within a specific physical setting, is established as the principles of this study (Fig.3). This principle achieves relevance when it comes to public space in the contemporary Japanese context. Therefore, the thesis deals with 81 contemporary Japanese public buildings, of which the pitched roof main can be identified as a basic Japanese roof type. Eaves cantilever more than 1.8m and are facing the approach. Eave configuration that determines a particular spatial articulation is defined by three elements: Relation between nokishita, nokisoto1, and nokisoto2 and the circulation beneath and access towards a building. The points between domains are defined as transition points (Fig.2). Domains obtained by eaves possess the ability to articulate and appropriate the adjacent exterior space experienced through the approach. The relation between eaves projecting spatial articulation, and the approach, conceived as the sequence composed of the following arrows: DIVISION, COVER, or INTEGRATION. The classification into three main and eight minor categories demonstrates the potential in reinterpreting the traditional element eaves on appropriation in the approach of contemporary Japanese public buildings and therefore strongly affect public space through architectural design.