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Contemporary residential streetscape: how colors and material differ from the traditional streetscape. A case study in Tokyo

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1. Nature, sensations and colors

spiritual world.

Traditional Japanese colours' origin and meanings derive from a very unique aesthetics, which was developed in Japan through centuries. Japanese culture is embedded by local Shinto, but was also influenced by Chinese and Buddhist philosophies. In fact, Japanese culture is characterized by periods in which foreign cultures entered into the island and others, in which the country was closed to the outer world. Those enclosed periods were fundamental for the creation of the specificity of Japanese aesthetics, which influenced arts and the view of the world. Shinto brought a strong sense of the importance of being in harmony with nature. In Shinto nature is strictly connected to spirit. Each natural element has its own god *kami* (神), a "soul". Flowers and animals, rocks and rivers, bays and islands possess their own and autonomous spiritual life (Calza, 2004). Thus, relationship between man and nature is quite different from the Westerners, because Japanese people feel the need to be immersed into nature. By feeling nature, people get closer to the

Nature is loved with its cycle and seasons. Buddhist philosophy enhances the perception of things in nature. For instance, *Mono no aware* (物の哀れ) is the concept describing the ephemeral beauty of things in nature. *Aware* means "feeling" but also "sadness", and *mono* means "things". It is about the attention and admiration for what is flowing and irreversible, it is about a melancholy feeling and loneliness, about acceptance of transience. Thus, perception of space in Japan is connected to time and seasons being the transience of things deeply rooted into the Japanese culture and tradition. Coming to colors, the Japanese color world is a direct expression of the Japanese culture. Thus, it is not surprising that most of *dentouiro* (伝統色), the traditional colors, have names deriving from nature. Names are depicting colors from flowers and plants in all different seasons, and also from birds and rocks. Nowadays, we can count around 500 names for traditional colors. In Figure 1 the chart represents a Red Series of them. We could say that the chart refers to traditional colors as in Japan in Edo period, as well referred by Sachio Yoshioka (2014).

Colors in nature have many different hues, and they can change based on sunlight and climate conditions. Especially, spring and autumn are seasons in which Japanese can appreciate the variety of colors, such as the famous and beautiful views of mountains in fall with red leaves from maple trees, as in Figure 2.

Traditionally, also the moon was highly considered as creating beautiful and special colors, reflections and atmospheres. Names of colors define those different atmospheres.

Red Series [edit]

Name	Romanized	English translation	RGB	Hex triplet	Name
鴇羽色	Tokiha-iro	Ibis wing color	245,143,132	AFFERE	桜鼠
長春色	Chōshun-iro	Long spring (season) color	185,87,84	#B95754	唐紅/韓紅
経胎色	Enji-iro	Cochineal red/rouge	157,41,51	#90Z933	深維
甚三M	Jinzamomi	Thrice-dyed crimson	247,102,90	#F7665A	水がぎ
梅鼠	Umenezumi	Plum-blossom mouse	151,100,90	#97645A	蘇芳香
赤紅	Akabeni	Pure crimson (dye)	195,39,43	∌ C3272B	真朱
小豆色	Azuki-iro	Red bean color	103,36,34	#672422	額朱
海老茶	Ebicha	Maroon (Shrimp brown)	94,40,36	#5E2824	栗梅
曙色	Akebono-iro	Dawn-color	250,123,98	ATX/262	珊瑚色
猩々緋	Shōjōhi	Red-orange (lit. orangutan-colored)	220,48,35	♦ 803023	芝翫茶
柿洪色	Kakishibu-iro	Persimmon-juice color	147,67,55	#934337	紅樺
紅葉	Benitobi	Red kite (bird species)	145,50,40	#913228	紅檜皮
黑蔥	Kurotobi	Black kite (bird species)	53,30,28	#351E1C	8I##
照柿	Terigaki	Glazed persimmon	211,78,54	#D04E36	30
江戸茶	Edocha	Red-brown (Edo brown)	161,61,45	#A13828	紅柄色
檜皮色	Hihada-iro	Cypress bark color	117,46,35	#752E23	宗色
洗朱	Araishu	Rinsed-out red	255,121,82	£117352	赤香色
ときがら茶	Tokigaracha	Brewed mustard-brown	230,131,100	skenner	黄丹
蘇比	Sohi	Overdyed / refreshed red-brown	227,92,56	#ESSCS9	這州茶
唐茶	Karacha	Spicy red-brown (Chinese tea brown)	179,92,68	#B35C44	樺茶
宗傳唐茶	Södenkaracha	Faded spicy red-brown	155,83,63	♦95533F	雀茶
栗皮茶	Kurikawacha	Chestnut-leather brown	96,40,30	#60281E	百塩茶
薦色	Tobi-iro	lbis-color	76,34,27	#4C221B	

Fig. 1 – Red Series of traditional Japanese colors chart. (https://en.wikipedia.org/wiki/Traditional_colors_of_Japan)



Fig. 2 – Nature's kaleidoscope of autumn: mountain colors of Japan. (Kateigaho, International Edition, Vol. 24, pp. 23-24)

2. Japanese traditional streetscapes

At the end of the XIX century, first Westerners who visited Japan found Japanese cities and architecture too simple and without ornaments. Edward Morse appreciated and understood Japanese culture, declaring its differences from the American architecture and cityscape. And when describing Tokyo' streetscapes he affirms "... Japanese house is... unsubstantial in appearance, and there is a meagerness of color. ... Where external walls appear they are of wood unpainted, or painted black; and if of plaster, white or dark slate colored. In certain classes of buildings the outside wall, to a height of several feet from the ground, and sometimes even the entire wall, may be tiled, the interspaces being pointed with white plaster." (Morse, 1990: 6-7). Mainly, traditional architecture is built out of wood. Wood is left unpainted.

In the built environment, natural materials kept their original colors and features. The finishing of materials should emphasize the material peculiarities or irregularities. Among elements of beauty we can find the irregularity of materials, and their textures. Thus, wood is appreciated in its veins and torsions; rocks in their peculiar shapes. A traditional Japanese house was designed for looking at the landscape and the changing of seasons. Interior spaces were characterized by warm and consistent atmosphere, based on subtle variations of intensity and gradation of few colors connected to colors of wood and earth.

When writing about traditional Japanese architecture and aesthetics principles, Atsushi Ueda (1990), Sachio Yoshioka (1999) and Mira Locher (2015) underline the consciousness of the use of few colors in architecture.



Fig. 3 – Kanazawa – Samurai Residences Streetscape. (Photo by the Author)



Fig. 4 – Kyoto –Gion Area Streetscape. (Photo by the Author)



Fig. 5 – Takayama - Old Streescape. (Photo by the Author)



Fig. 6 – Takayama - Old Streetscape. (Photo by the Author)



Fig. 7 – Kyoto - Facades in Gion Area. (Photo by the Author)



Fig. 8 - Above: Utagawa Kuniyoshi. "Kasumigaseki". Series: Famous Places of the Oriental Capital (Edo). (in Ukiyo-e. Il mondo fluttante, p. 318) NAME ROMANIZED **ENGLISH** RGB in the traditional color chart: Right side: 1. 藍白 Aijiro Indigo white 235, 246, 247 2. 墨色 Sumi-iro Ink color 39,34,31 2 Left side: 3. 銀鼠 Ginnezumi Silver-grey 151,134,124 4. 黄朽葉 Kikuchiba Golden fallen leaves 226,156,69 5 5. 藍白 Aijiro Indigo white 235, 246, 247 3 NAME ROMANIZED ENGLISH RGB in the traditional color chart: 1. 銀煤竹Kinsusutake Golden-grey bamboo 125,78,45 Stained red 2. 紅碧 Benimidori 120,119,155 3. 黄橡 Kitsurubami Golden oak 187,129,65 4. 苔色 Koke-iro Moss color 139,125,58

Fig. 9 – Torii Kiyonobu I. "Courtesan in front of a Tea House" (in Ukiyo-e. Il mondo fluttante, p. 341)

5 薛白

Aiiiro

Indian white

235 246 247

Colors are generally the colors of natural materials which are used in construction. Zen strongly influenced Japanese aesthetic concepts. Among the most loved ones: wabi, simplicity and poverty expressed through extreme synthesis of forms, sabi, the coat showing the passage of time in all things and yugen, the subtle incantation of things which cannot be expressed through words. The quality of material, the uniqueness of what it is used for a specific site are crucial qualitative values. Thus, as said, if a piece of wood is curved and it presents peculiar texture, then it will be used emphasizing its natural properties.

In traditional Japanese architecture, the built urban landscape in streetscapes appeared quite homogeneous, providing a strong visual identity to space.

A traditional streetscape presents few colors, mainly ranging among brown, grey and black tonalities. In existing historical areas of Japanese cities we can still visualize those characteristics, even if changing according to the locations and styles (refer to Figures 3 to 7). In traditional art, we can find views of streetscapes, which resemble the Morse's description of Edo.

In Figures 8 the Utagawa Kuniyoshi's Ukiyo-e represents the street view of Kasumigaseki in Edo (the old Tokyo). And in Figure 9, "Courtesan in front of a Tea House" by Torii Kiyonobu I, the tea house has a more colored façade, with blue colored plaster. The colors of the buildings depicted in Figures 8 and 9 have been associated with the traditional colors palette, as referred at the Japanese traditional colors chart (https://en.wikipedia.org/wiki/Traditional_colors_of_Japan), with names and RGB (see page 5).

3. Contemporary residential streetscapes

Nowadays, most of the Japanese residential areas are composed by a vast number of single house buildings. Housings are located one next to the others, being separated by very narrow spaces (the minimum space ranges between 50 to 100 cm). Few areas are left for outdoors, but nevertheless greenery finds its place.

Housing's forms can be various, but when coming to colors they tend to present variations among grey and brown colors.

In most of the newly built houses' environment the actual tendency is even stronger, in showing very few colors in façades: large façades are white (as visible in Figures 10 and 11). The newest pamphlets advertising new housing settlements denote a tendency to wide and white façades (as in Figure 12). Colors are present thanks to plants and flowers located in front of the houses: the pamphlet at Figure 12 denote a late cherry blossoming in spring days.

Japanese people tend to personalize their settings through the use of plants, small vases in which continuously they change flowers and arrangements. Those flowers, area selected at seasons. Colors change accordingly. Those vases, mainly located at the houses' entrances, are positioned at various heights, to be easily visible at ground floor level. Vivid colors are there, in small spots, combined together according to the inhabitants' own taste and sensibility (see Figures 17 to 20).

Regarding the built environment, Figures 13 to 16 an analysis on-site show the main colors in facades. A chart of traditional Japanese color samples was used for comparison on-site.





Fig. 10/11 – Kamisaginomiya – Tokyo. Residential Streetscape. (Photo by the Author)



Fig. 12 – Pamphlet promoting new single housing in a contemporary residential area in Tokyo. (Diana House)





Fig. 13/14 – Residential buildings Façade in Kamisaginomiya - Tokyo. (Photo by the Author)

NAME	ROMANIZED ENGLISH	RGB
in the t		

1. 利休鼠 Rikyūnezumi Greyish dark green 101,98,85

12. 瓶覗 Kamenozoki Inside of a bottle 198,194,182
 13. 藍白 Aijiro Indigo white 235, 246, 247

NAME ROMANIZED ENGLISH RGB in the traditional color chart:

1. 藍鼠 Ainezumi Mousy indigo 92,84,78

2. 鳥の子色 Torinoko-iro Eggshell paper 226,190,159

3 白鼠 Shironezumi White mouse 185 161 147

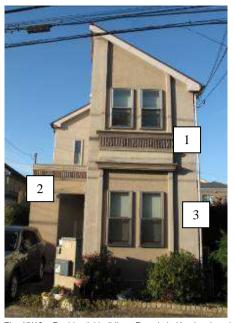




Fig. 15/16 – Residential buildings Façade in Kamisaginomiya - Tokyo. (Photo by the Author)

+	NAME ROMANIZED ENGLISH in the traditional color chart:			RGB	
	1. 素鼠	Sunezumi	Plain mouse	110,95,87	
	2. 蒸栗色	Mushikuri-iro	Steamed chestnut	211,177,125	
	3. 鳥の子角	Torinoko-iro	Eggshell paper	226.190.159	

	NAME in the tradi	ROMANIZED		RGB
	1. 素鼠	Sunezumi	Plain mouse	110,95,87
	2. 蒸栗色	Mushikuri-iro	Steamed chestnut	211,177,125
	3. 白鼠	Shironezumi	White mouse	185,161,147









Fig. 17/18/19/20 – Use of green in front of residential buildings in Kamisaginomiya - Tokyo. (Photo by the Author)

4. Materials

Comparing to traditional housing, nowadays typologies and construction techniques are completely changed. Materials as well. Housing facades present different cladding according to the construction's period.

It goes from wooden material to plaster, from tiles to plastic. Nowadays, a major tendency it could be found in the use of printed plastic materials, resembling natural materials, such as bricks and stones. Figures 21 to 36 illustrate materials' images and colors.

Wooden Materials and natural colors.





Fig. 21/22 – Wooden facades' details in Kamisaginomiya - Tokyo. (Photo by the Author)

Plaster finishing and colors.







Fig. 23/24/25– Facades' details. Plaster finishing - Kamisaginomiya - Tokyo. (Photo by the Author)

Polished concrete and natural color.



Fig. 26– Facades' details . Concrete. Kamisaginomiya – Tokyo. (Photo by the Author)

Bricks walls (especially as fences).



Fig. 27– Facades' details in bricks. Kamisaginomiya – Tokyo. (Photo by the Author)

Facades in tiles.













Fig. 28/29/30/31/32/33- Facades' details. Tiles cladding - Kamisaginomiya - Tokyo. (Photo by the Author)

Facades in printed plastic imitating natural materials.







Fig. 34/35/36- Facades' details. Cladding in plastic- Kamisaginomiya - Tokyo. (Photo by the Author)

5. Conclusion

At first glance, residential streetscapes in Japan look monotonous and lacking of a strong identity. Those settlements define large parts of Japanese cities. Comparing to traditional streetscapes it is possible to notice a lack of order in facade composition, and a growing tendency in using artificial materials for cladding. The plastic materials used for cladding barely reproduces textures of natural ones. The use of plastic is justified by its low costs and easy maintenance: sabi, the coating on materials defined by the passage of time is not anymore a value. Regarding colors, the tendency to avoid vivid colors is still present. Moreover, colors just resemble the faked materiality of wood, stone or brick. It is not always possible to refer colors to traditional ones. In further studies the definition of traditional and contemporary colors should be explored and questioned. The relation with nature is kept through the plantations on small spots of land facing the houses. Flowers accurately change according to seasons and from trees' blossoms. Those trees have been chosen to be alternately blooming in different moments of the year. With movable objects such as vases, inhabitants express their personal taste and sensibility choosing flowers and arranging them. The attention to seasons and colors that traditionally was also visible in clothing and especially in kimono's wearing, nowadays is exclusively visible in the small gardens' arrangements. The built environment is waiting to be en-lighted by colors of nature, offered by the small and ever changing green spots. The present study is still very wide. It focuses on several issues. It regards colors in

urban life. The research would be further conducted on studies about:

- the notions of the traditional Japanese color world;
- the definition of "traditional colors" and "contemporary colors";
- the notion of color in urban life, with analysis of nomination of colors, the color of clothing, the urban coloring, and deepening the analysis on the exterior architecture as well as gardens.

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