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RUSKIN REVISITED: "MATERIAL TRUTH" AND COLOR IN CONTEMPORARY ARCHITECTURE

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ABSTRACT

J. Ruskin (1849) rejected the simulation of materials with color, opposing to a usual expressive source in ancient buildings. Modern architecture complied with this principle using "flat colors", which abstract the nature of the material. Postmodernism reintroduced textures with color but did not imitate other materials, with exceptions (e.g. T. Taveira). Nowadays, the principle of "material truth" is still alive, although the concept has evolved: material truth is identified with any artificial pigmentation integrated into the material. This principle of inherent coloration is claimed even by those most unprejudiced architects (e.g. W. Alsop).
Contemporary materials may also have any pattern, reconciling the respect for "a priori" color provisions together with an imitation of new textures (e.g. R. Koolhas or Herzog & de Meuron). The Ruskinian principle has evolved, but remains latent in contemporary architecture.
Keywords: Architecture, Material, Ruskin, Contemporary

1. INTRODUCTION

In 1849, J. Ruskin (1819-1900) anticipates part of the modern architecture ideals. In chapter II of "Seven lamps of Architecture" [1], defends the pursuit of material and structural "truth" in architecture. He advocates a rejection of "deception", "slander", "hypocrisy" and "betrayal"; and states that color outdoors is lawful if it can be perceived as painting and renounces to imitate textures of building materials. In 1906, A. Loos (1870-1933) [2] will insist on this point and will put an end to such an old and extended chromatic resource.
Ruskin believes that painting *"slices the work into two parts and levels, one less durable than the other, which is extinguished as time goes by and leaves building, unless it has noble qualities, naked and undecorated."*
Those colors that are able for the architecture, correspond with the construction material color itself, in its natural

state, involving a wide range of shades and avoiding the possible falsity of the painting: *"The true colors of the architecture are the natural stone ones, and I would like to see them thrive as much as possible (...). This is the fair and true way to build".*

The Scottish artist David Batchelor (1955-) draws attention onto the moral adjectives that describe this principle ("fair", "true"), and those that fuel the "chromophobia" [3] of Western culture. The author believes that *"the color has been systematically marginalized, demeaned, diminished and degraded"* because of *"generations of philosophers, artists, art historians and culture theorists, who have kept alive their prejudice warm and well fed".* Bias towards color consists in considering color either dangerous or trivial*: "In the first case, the color is interpreted as the property of an "alien body "-usually the female, oriental, primitive, infantile, the vulgar, the strange or abnormal.* [In the second case] *the color is relegated to what it is superficial, supplementary, not essential or cosmetic. (...) The color is dangerous, or trivial, or both at once (typical bias is to relate sinister with superficial)."*

The conception of architectural color as something "dangerous" involved authors such as Aristotle (384-322 BC) [4] Plato (427-347 BC), Pliny the Elder (23-79), or the historian Winckelmann (1717-1768), who imagines classicism in white. With regard to color, *"rational tradition of Western culture was always under the threat of non-Western insidious sensuality"* [5]. Johann W. Goethe (1749-1832) himself, although developing his own Theory of Colours (1840), links brightly colors with less developed cultures: *"*[It should be noted that] *the wild country with uneducated people and children, have a great predilection toward bright colors, (...) that people reject refined colors in dresses and objects around us, and seem inclined to avoid them in their environment "*[6].

On the other hand, the architectural concept of color as "trivial" or secondary has been fueled by characters such as Immanuel Kant (1724-1804) or the author in question, J. Ruskin. Kant believes that the color can add "charm" to a work of art, but can not participate in the grand schemes of the beauty or the sublime. For Ruskin, the color should belong intrinsically to the material, thus preventing its secondary conception.

2. HISTORICAL EVOLUTION OF THE CONCEPT OF "MATERIAL TRUTH"

2.1. Architectural avantgards. Modernity.

Architectural modernity develops two important positions in relation with the Ruskinian principle of "material truth". On one hand, those architects who prefer the natural color of materials, uncoated, those who renounce to the artificiality of the "color as a coat". This first group is integrated by rationalist architects of the '60s, followers of Mies van der Rohe (1886-1969), and heirs of the chromatic path of German architect Friedrich Schinckel (1781-1841).

On the other hand there are the architects who follow the neoplastic and constructivist art movements, those who think that plain colors, without imitating textures, abstract colors, "denatured", are as worthy finishing as the natural material. Theo van Doesburg (1883-1931) considered similar tension between the concrete and wood with the contrast between the blue and yellow [7]. In fact, flat colors, without drawing any texture, may suggest themselves a textured effect. This is pointed out by the expressionist painter and professor at the Bauhauss V. Kandinsky (1866-1944), who emphasizes the tactile qualities that have certain shades themselves: *"Some colors look rough and bristly, others are polished and velvety, and invite to touch (like the dark ultramarine blue, chromium oxide green). There are*

Fig.1
IADE Totovola Building (Lisbon, 1973-1984). Tomás Taveira.
Fig.2
Sports hall for the Lycée Duhoda in Nimes. Artist Alain Bony for architect Jean Nouvel [13]
Fig. 3
Paula Rego Museum, Cascais, Portugal, Eduardo Souto de Moura, 2009.

colors that seem soft (Garanza varnish) and others that seem so hard (cobalt green, blue-green rust) that seem dry as soon as they come out the tube (...)"[8]. However, we have not found any architect in this investigation who relates the use of a given flat color by its intrinsic texture.

Those modern architects who were more concerned for color, including B. Taut (1880-1938) or Le Corbusier (1887-1965), respected both positions on the principle of "material truth": they combined natural finishes of materials (concrete, steel, glass) with solid colored stucco (no textures), homogeneous in terms of hue, value or chroma. In fact, Johnson and Hitchcock proposed the principle of "flat colors" as a criterion to identify "modernity", considering that *"it is important that the surface is flat, not concave or convex, since otherwise the effect would be colorful and the impression of multi-directional tensions would be lost"* [9].

2.2. Postmodernity and contemporarity

It is difficult to assess the influence that the Enlightenment may have on professional practice today, but Sauerbruch & Hutton architects (1989-) note that it remains a bias towards a merely superficial application of color, detached from the shape or the material nature: *"colored surface was (and is) perceived as subordinated to the white body (it has been assumed that if the form is not colored, it can just be white) (...). Today, this bias is stronger than ever "*[10]. In fact, examples of contemporary buildings with colors imitating materials are very scarce. An example is the IADE Totovola Building (Lisbon, 1973-1984) by the Portuguese architect Tomás Taveira (1938-) (fig. 1), in which the concrete is painted with a metallic color to mimic the steel, because of very exceptional circumstances that occurred during the execution of the building.

This does not mean, of course, that the texture is not

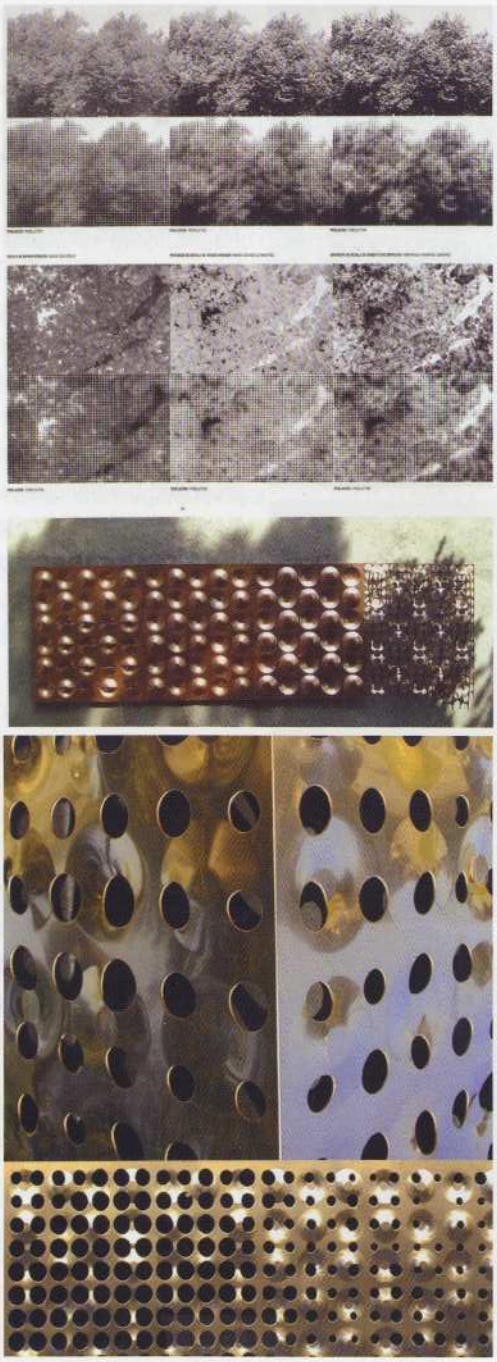

Fig. 4
Finishing for The Young Museum, San Francisco (USA), 1999. Herzog & de Meuron [14]

an important concern in contemporary architecture. On the contrary, it is usual finding colors that incorporate new textures and distance themselves from the traditional "plain colors". Interventions of artist Alain Bony for architect Jean Nouvel (fig. 2), or many Swiss buildings are good examples of this (eg much of the work by Herzog & de Meuron).

R. Koolhaas (1944-) himself, when applying to each of the more than thirty members of OMA to select his favourite color, shows that very few of them choose a plain or isolated color, and most of them choose a color with a kind of treatment: *"Not just one layer of color but a more subtle condition, a layer that alters the state of the wall or the object, a color that might interfere with the status of the painted object"* [11].

Therefore, the emergence of new materials and coloring techniques has allowed the Ruskinian principle of material truth to evolve in two ways:

1. Alien colors but inherently integrated in the materials, as a dye. These are unnatural colors combined with the natural texture of the material itself (fig. 3)
2. Alien textures but inherently integrated on the materials. Textures that usually do not imitate or mimic other natural textures, but represent abstract patterns or others (fig. 4)

Therefore, in contemporary architecture thinking, it remains the Ruskinian principle that the color should better be integrated in the material *a priori* and not as an addition *a posteriori.* And also the texture drawn with that color usually does not confuse with the natural texture of the material itself.

Even the British architect William Alsop, critic with the most conservative positions in architecture, claims for the linking between color finishing and material nature: *"I can introduce color into buildings ... not painting the building, because the color should be integrated into the contemporary material and that is what I do ... and I realize that people respond to these places very well, and too often there are places that look like graves ... "*[12].

3. CONCLUSIONS

We conclude that, although the ability of color to interfere with the texture of the architecture was very important in historic buildings as a resource to mimic natural materials, such a use disappeared almost completely in modern architecture after the writings of A. Loos in the early XXth century.

The conflict with color understood as an ornament as that conceals the "truth" of the material is resolved because these are not split properties anymore: the contemporary material is inherently colored (often) with vivid hues, and the material truth matches with its chromatic one. The color is not something added *a posteriori*, and it is not a skin or a layer that hides, that perverts or lies about the real material composition, and color may finally be assumed as a finish itself.

So, paradoxically, the return of color to the contemporary moment is not necessarily an overcome of the principles raised by J. Ruskin but the consequence of the improvement in finishing of building materials, which has allowed using color freely, without transgressing the principle of "material truth".

It has been overcome the term "natural color" or "color of the material itself" as a concept opposed to "artificial color". It is difficult to be sure about what it is the "natural color" of some eminently artificial building materials, so in some way architects have assimilated the "natural color" or "color itself" with that one that does not need to be applied *a posteriori*, but comes together with the material, or over it, already from the factory. Color has managed to slip out this back door and settle again on the stage of contemporary architecture

REFERENCES

1. Ruskin J., 1985 *The seven lamps of architecture,* Alta Fulla, Barcelona, 2000, pp. 216, ISBN: 8479001224.
2. Loos A., *Ornamento y Delito y Otros Escritos,* Ed. Gustavo Gili, Barcelona, 1980, pp. 276. ISBN: 8425200121.
3. Batchelor D., *Chromophobia,* Ed. Reaktion Books, London, 2000, pp. 124, ISBN: 9781861890740; 1861890745.
4. Lichtenstein J., *La Couleur elloquente: Rhetorique Et Peinture a l'age Classique,* Ed. Flammarion. Paris, 1989, ISBN: 208012613X.
5. Gage J., *Color y Cultura: La Práctica y El Signifi cado Del Color De La Antigüedad a La Abstracción,* Ed. Siruela, Madrid, 1997, pp. 335, ISBN: 8478443800, p. 10.
6. Goethe J.W., *Teoría De Los Colores,* Ed. Colegio Ofi cial de Arquitectos Técnicos de Murcia, Murcia, 1992, pp. 404, ISBN: 8460610128.
7. Doesburg T.V., "The Will of Style" in *Form and Function,* 1922, pp. 45.
8. Kandinsky V., *De Lo Espiritual En El Arte,* Ed. Labor, Barcelona, 1992, pp. 122, ISBN: 8433535099, p. 43-44.
9. Hitchcock H, Johnson PC. *The International Style: Architeture since 1922,* Colegio Oficial de Aparejadores y Arquitectos Técnicos de Murcia; 1984, 57 pp. 68, 94.
10. Sauerbruch M. and Hutton L., *Sauerbruch Hutton Archive,* Ed. Lars Müller, Baden, 2006, pp. 331, ISBN: 9783037780831
11. Koolhaas R. "The future of color is looking bright" in Koolhaas R. et al, *Colours,* Ed. Birkhäuser, Basel, 2001, ISBN: 3764365692.
12. Serra J., "Colors that come to bear projects. An interview with William Alsop", *Expresión Gráfica Arquitectónica,* Ed. Asociación de Departamentos De Expresión Gráfica Arquitectónica, Valencia, 2010.
13. Porter T. and Mikellides B. *Colour for Architecture Today,* Ed. Taylor & Francis, London, 2009, p. 180. ISBN: 9780415438148
14. *Herzog & De Meuron : 1998-2002 : La Naturaleza Del Artificio = the Nature of Artifice.* Ed. El Croquis. Madrid, 2002. pp. 360. ISBN: 9788488386274.