



Matter presences: the sensitive consequences of the mechanisation of the raw material

Nuria Alvarez Coll (1)

alvarezcoll.n(a)grenoble.archi.fr

(1) École Nationale Supérieure d'Architecture de Grenoble (ENSAG) - Laboratoire CRESSON/
UMR AAU, Grenoble, France

Abstract:

Heir from a culture marked by modern dualism, man seems to find himself, abstract from his environment. As a consequence, a large number of human creations today is considered by some authors as uprooted. Built with earth, vegetal fibers, stone, etc., vernacular architectures appear as an extension of nature, its colors, its materials, its forms and its textures. Most of the contemporary architecture examples, on the contrary, seems to have lost this link with the territory, the natural cycles and the human know how. Could the use of raw materials and the promotion of touch (and a more direct relationship to the world) be allies to create architectural spaces that reaffirm a better link with the body and reboot a genius of the site?

This article questions the transformation of raw materials into building materials. Referring to the work of art in its mechanized reproduction, Walter Benjamin refers to the loss of aura. This concept is reinforced by the notion of the sacred developed by the anthropologist Michael Taussig who, when speaking of synthetic color, refers to the loss of the body of color. The passage by these two thinkers raises some questions to reflect on our sensible relations to the non-human in order to stop this relation of exploitation towards matter.

To conclude, the paper presents a tactile experience entitled "Material Presences", developed within the framework of a creation research. This experience proposes to reflect on the presence of materials and the notion of aura: What does wood matter transmit to us according to its type of transformation? Does this transformation process change our sensory relationship to this material? Can we say that some have lost their aura?

INTRODUCTION

This article questions the transformation of raw materials into building materials. After the industrial revolution, the human being is freed from the manual transformation of matter which entailed hard conditions of life. This detachment of the human being from the

transformation process implies the beginning of the mechanization of the material and its consideration as an inanimate, inert material.

Today, the consequences of this exploitation of resources are alarming. Industrialization leads us to the current ecological crisis but also to an inevitable "*spiritual erosion*" (Cisneros, 2016). To overcome this emotional death that Albrecht informs, we need a deep ecological change. The recipe, far from being simple, would contain ingredients whose measurements are not quantitative: emotional revolution composed of new narratives with a subtle touch of magic.

The second part studies the sensitive consequences we experience in contact with the current materiality of our world through Michael Taussig's reflections on the "sacred" of color and Walter Benjamin's notion of "aura".

Finally, we will describe a tactile experience entitled "Material Presences", developed as part of a creative research. This experience proposes to reflect on the presence of materials, its aura and the notion of living. What does the material (and more concretely wood matter) transmit to us according to its type of transformation? And finally, how does this exploitation of resources affect the perception of architectural spaces?

2. BEYOND THE TRANSFORMATION OF MATTER

2.1 When color loses its body

“... the way the primeval forests and swamps went under to become coal and petroleum, the way that coal gas came to illuminate nineteenth-century cities and excrete a waste product from which first colors and then just about everything else could be made in one mighty imitation of nature. We cannot see that as sacred or enchanting because we have displaced that language of alchemy by that of the chemists. We do not mistake color for calor¹.”

(Taussig, 2009, p.6)

Michael Taussig considers that industrialization has killed the body of the color. According to the sociologist, the current color manufactured by chemistry is limited to a purely retinal activity if we compare it with the handcrafted colors, where the vision of the color involved a total body activity.

He refers to the history of ultramarine color, produced from the semi-precious stone lapis lazuli in Afghanistan. The pigment is composed of large irregular crystals of varying

¹ Isidor of Seville assimilated the color with the calor (heat in French), to speak about the corporality of the colors.

transparency and blue color. In addition, these crystals are grouped with particles of mica, quartz, calcite and pyrite. The painter and writer Anita Albus compares this color to the glitter of the firmament. Calcite crystals, she says, "*sparkle like stars in the deep blue*" (Albus, 2000). The synthetic pigment produced in factories as early as 1830 has homogeneous, round crystals that produce a uniform blue surface.

This flattening and loss of richness of color in the nineteenth century also stifled centuries of craftsmanship, including the enormous work of preparing pigments. On their canvas, painters applied alternating layers of opaque colors and transparent varnishes (glazes). A cross section of a painting made with this technique allowed us to discover "*a landscape of geological layers of different shapes and colors.*" (Albus, 2000) or what Cézanne called "*the secret soul of grounds*" (Taussig, 2009).

The mechanization of matter has cut this deep connection of matter with the universe that allows us "to see a world in a grain of sand" (Blake, 1863). If the names of the shades of color were referring to our world, plants, animals, minerals, insects today they are no longer relevant. Sky blue, lavender blue, turquoise blue, gentian blue, violet blue, cornflower blue, reed green, apple green, olive green, almond green, sea green, emerald green... are names that replace the authentic materiality of the color, its body. Even if a name can make travel and transport elsewhere, they add the magic of artifice.

This reflection led by Taussig of the loss of the body of the color and loss of intimate link can be widened to the materiality of the world and to its sensory characteristics. Industrialization allows to democratize materiality which would not be accessible to the whole population otherwise than with the chemical processes. We are in the process of recasting the materiality of the world by creating new referentials that simplify the sensory information of our environment. But what are the consequences of this democratization regarding to our sensitive experience of the world?

2.2 Context, authenticity and technique

Walter Benjamin referred to the loss of aura of the work of art during its mechanized reproduction. In the following lines, three main notions developed by Benjamin allow us to understand the factors that, according to him, confer this auratic presence to the material: context, authenticity and technique. At the same time, this analysis allows us to bring the reflection to the field of architecture: what are the consequences of the industrialisation of raw materials in the feeling of a space?

Context

The aura of a work of art is linked to its *hic et nunc* - here and now in Latin - that is, its unique existence in the place where it is located.

If we look at vernacular architecture, the building reflects the surrounding landscape: its shapes, textures and colors. Unique architectures for a unique place. This contextualization endows spaces with a characteristic emotion that makes us feel that a construction is in harmony with a place.

Authenticity

“Ce hic et nuc de l’original forme la notion d’authenticité (...)
L’authenticité est ce qu’elle comporte de transmissible par son
origine, sa durée matérielle comme son témoignage historique.”

(Benjamin, 1935, p.41)

Stone, earth, wood, hemp, straw, bamboo, and reed, among other building materials, are steeped in the history of their origins and the history of their use by humans (Pallasmaa, 2012). As they age, they allow themselves to be transformed with patinas of wear and erosion; they transmit their age. The materials are witnesses of time and their way of expressing it is authentic.

The notion of authenticity of these materials also lies in the fact that these materials have unique textures. Their surface patterns are never exactly repeated, allowing our gaze to dive into an infinite depth that resonates with that of our own flesh² (Abraham, 2000).

Technique

“The origin of the second (industrial) technique must be sought in
the moment when, guided by an unconscious ruse, man first prepared
to distance himself from nature.”

(Benjamin, 1935, p.47)

In primitive technique, the human was engaged as much as possible. This bodily engagement keeps the tradition alive and preserves a territorial “savoir faire”. Industrial technique engages the human as little as possible and detaches the reproduced thing from the realm of tradition.

In conclusion, the use of raw materials in construction weaves the link between our environment and our history; they situate the building in space and time. This contextualisation endows spaces with a characteristic emotion that makes us feel that a construction is in harmony with a place, conferring a continuity between human, matter and universe. It is this material presence - that Taussig defines as the 'sacredness' of colour and Benjamin as the 'aura' of the work of art - that could offer an alternative to the “architectures hors sol” that Berque refers to.

² The notion of "flesh" was developed by the philosopher Merleau Ponty.

3. MATERIAL PRESENCES

3.1 Context of the tactile experience

In this section we will present an exercise that was proposed on two occasions: as part of the event "Embodied Interventions" organized by the laboratory Milieux of Concordia University and in the context of the creative research "l'orée des bois" exhibited at the University of Quebec in Montreal (UQAM) during the months of May and June 2022.

The experiment was carried out by a total of 16 participants from different academic backgrounds (a large majority of sociologists, artists - researchers and professors) and proposes two complementary times:

- Touching the wood material in different degrees of transformation, from the raw wood to the material transformed into building materials and objects.
- Collecting reflections on the sensations released by the different materials.

The space of the experience is composed of a central space containing, hidden under a cloth, wooden objects in different degrees of transformation: raw wood, industrially transformed objects and handcrafted objects. The researcher invites the participants to sit around the hidden material and explains the objective of the experiment: to touch the wood material to experience how this material touches them. The experience takes place blindfolded in order to let the information brought by the other senses emerge. Without the hegemony of



Figure.1: Participants discovering visually the different wooden objects.

vision, participants can travel easily in their sensations, their body memories, their evocations and their imagination.

Once the researcher distributes all the wooden objects, participants have one minute to discover its shape, texture, weight, consistency, smell and the sound it makes. Then, the researcher will guide participants to pass the piece of wood to the person on their right.

After this sensory exercise and before the participants discover visually the different wooden objects, the researcher invites them to express their experience.

Then, the researcher proposes a collective reflection around the following question: Among these wooden objects, can we say that some have lost their aura? Do the transformation processes of wood change our sensory relationship to this material? After giving a brief definition of the notion of aura according to Benjamin's reflections, the participants will have to classify the wood samples on an "auratic scale" ranging from "material that contains aura" to "material that has lost its aura".

3.2 Reflecting on the notion of aura

Raw Wood:

First of all, the participants associate the notion of aura to raw materials. The presence of lichens, traces of beaver teeth or pieces that have been polished or blown away by the wind take the first place of aura's presence without any doubt.

Raw wood with traces of human technique:

Pieces of raw wood on which the presence and the technique of the human being are remarkable change this auratic perception: "*I was thinking that things that have been cut by the man in a way... With a tool... Let's say very brutal, Brutal in the sense that it's completely... There is a will of the man to cut, there is less aura than a branch that has been torn off by the wind.*"

Depending on the type of trace from the cutting of a trunk or branch, the objects may contain more or less aura. One of the objects was a wooden wedge -that results from cutting a trunk to fell a tree- and therefore contained a larger narrative than the branches cut perpendicularly for tree pruning.

Wood transformed by humans: objects and materials

On the materials transformed by human, participants define the presence of aura as related to two factors:

Firstly, the ageing by the time but also by the use of the piece allows for more imagination, the object has more stories to tell, the narrative expands. In contrast, completely new objects have the loss of aura that Benjamin refers to: "*Yeah, I remember. It's like a floor beard with barnish on it, it's horrible. there is no more smell on this anymore.*"

Secondly, the fact that the object is handcrafted brings aura. The gestures remain in the wood. With these decisions sometimes come doubts about the authenticity of the piece: "*Yeah, but I'm still reluctant. If I was sure, it was old, I would say yes. But I know that in the context in which we are, maybe it's only imitation...*"

For some objects, the personal narrative of each participant adds an additional factor to consider: "*Oh, for me the spoon is like top. But this is related of my love of food, so. but I see that my own little spoon that's me.*"

In one of the events, the participants manage to extract a conclusion about the presence of aura, proposing two types of aura's classification: aura transmitted by objects from nature - without human intervention - and aura transmitted by objects in relation to culture - with human intervention. In the words of the participants: "*Cultural love and Natural love*". To build, human intervention is indispensable. So, the reflection could continue by asking: how to print respectful gestures on the wood to preserve this material presence?

CONCLUSION

This article emphasizes the importance, now more than ever, of using low grey energy materials. The aesthetics of architecture should no longer be separated from its ethics: the design and conception of buildings should constrain the wide range of materials available to architects.

The concept of emotional death³ (Albrecht, 2019) makes us look at matter as an inert entity and therefore ready to be at our service. By mechanizing it and transporting it from the other side of the world, we cut deep links between matter and its environment.

The return to the body and to feelings through the experience of "Material Presences" shows us the importance of a respectful human intervention. How to weave again this empathy towards the matter which composes our inhabited spaces? Perhaps it is time, as Jane Bennett proposes in her book *Vibrant Matter*, to "*allow ourselves to be temporarily infected by discredited philosophies - animism, vitalism, for example - in order to bring the attention*

³ A lack of response to the end, death, or loss of nature.

of the senses, language, and imagination to the vitality of matter, even if it means minimizing the cultural production of reality.”

BIBLIOGRAPHIC REFERENCES

Abrahm, D. (2000). La magia de los sentidos. Kairós. 303 p.

Albrecht, G. (2019). Les émotions de la terre. Des nouveaux mots pour un nouveau monde. Paris : Les Liens qui Libèrent. 364 p.

Albus, A. (2000) The Art of Arts. New York: Knopf

Bennett, J. (2010). Vibrant Matter. A political Ecology of Things, Durham and London: Duke University Press, 176 p.

Benjamin, W. (1935). L'œuvre d'art à l'époque de sa reproduction mécanisée.

Berque, A. (2012). Valeurs humaines et cosmicité : recosmiser l'aménagement, l'urbanisme et l'architecture. Master européen en architecture et développement durable, VIII. Université catholique de Louvain-la-Neuve. Conférence inaugurale.

Cisneros, D. (2016). La guerre des fleurs. Codex Ferus. Mémoire d'encrier, 156 p.

Granjou, C. Note de lecture sur le livre Jane Bennett, Vibrant Matter. A political Ecology of Things, Durham and London: Duke University Press, 2010,176 p.

Pallasmaa, J. (2012). The eyes of the skin. Architecture and the senses. John Wiley & Sons Ltd.

Taussig, M. (2009). What color is the sacred? The University of Chicago Press, Ltd., London, 292 p.