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Giuseppe Amoruso *Editor*

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Recovering Chromatic Space as a Sign of Identity in the Historic City

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Abstract. This article seeks to reflect on aspects that determine the signs of identity of historical cities through the land, architecture and color characteristics of its urban heritage image. In official agencies of European cities undertaking sensitive architectural interventions in their historic centers, there has been discussion for years over issues related to recovering the historic urban landscape. One of the issues addressed deals with recovering color as a sign of identity in culturally valuable historic architecture. Deciding on how to act and conserve materials and color as structural elements of the buildings entails fundamental nuances that define the urban landscape, and effectively conserving it must be granted certain importance in restoration projects. Likewise, it is hoped instrumental and scientific methods may be established to aide in building protection to advance the unique character of each place and territory.

Keywords: History · Color order · Heritage · Historical centers

1 Introduction

The discussion about color seems to have gained traction in recent years and aroused the interest of critics in so far as the problems of architectural restoration are concerned, at times lending importance to the equivalent technological or functional problems related to culture, tradition and how physical space is expressed by certain cultural groups. In European historical centers, policies focusing on color schemes are decided upon as a crucial part of the restoration process. Given the diversity in theoretical approaches to recovering the color of historical buildings, certain conservation plans emerge in which these tasks are rigorously discussed through a presentation of methodologies based on color ordinances for historic centers.

The differing approaches to what is needed to restore color to the historic centers of our cities has led to a series municipal ordinances with varying success. Defending the protection of natural and cultural heritage is goal around which the UNESCO, ICOMOS and ICCROM has coalesced, including recommendations on the study of the material nature and color preservation in architecture. Among other reflections and texts related to the color studies on the subject of landscape and architecture, the General Conference of UNESCO, for example, defined and understood Historic Urban Landscape as *“the urban area resulting from a historic layering of cultural and natural*

values and attributes, extending beyond the notion of "historic center" or "ensemble" to include the broader urban context and its geographical setting" [1, 2].

We note that conserving the landscape and territory of historic cities has significant transformations that affect, among other things, the nature of the territory itself, in short, the destruction of its very geography.

It must be said that in these new times, the sensitivities entailed in conservation and restoration work are considered and assumed by attempting to establish a certain rigor in proposals for architectural interventions. The scientific and technological methods used in the process of color recovery bear witness to the involvement of interdisciplinary teams that are increasingly sensitive to the expectations of restoration, management and assessment of issues relating to the conservation of traditional architectures and the gentlest ways of intervening in the ensemble of the urban landscape.

A city's different kinds of architecture are its cultural reference points and a sign of the value of its constructions. Color is part of the culture and tradition of a city's social history.

With this in mind, we collect a number of situations for which we believe it is necessary to learn the color characteristics of our cities and the need for restoring a cultural value without distorting its original appearance.

2 Objectives

The studies for Restoring Urban Spaces in Historical Centers in Europe are based on the conviction that color is an unavoidable part of the formal logic of architecture itself; that color is, like proportion, scale, ornamentation and the other aspects making up the aesthetic dimension of architectural forms, one part in the set of variables that make up the logical and articulated whole. Every era handles color in a certain way, whether it be through their use of processes, materials and building techniques, due to the limitations of the available technology or due to the logic of the reigning aesthetic trends themselves; and respect for the historical architectural form necessarily brings with it respect for the color logic from the period in which the building was constructed.

This logical link between architectural form, material and color is a feature that is common, for example, to all countries bordering the Mediterranean Sea, where similar material conditions coincide with a strong trade network of material and cultures, leading to analogous ways of building and similar ways of understanding urban space. There exists a spatial continuity throughout Mediterranean cities that has been produced from out of the cultural interactions of peoples in constant contact, beyond cultural identities and religious differences.

For this reason, among the other cases and examples we point out, the group of activities carried out in the city of Valencia might be offered as a valid methodology to be applied in all coastal nations to preserve a common cultural identity now under threat of intense urban processes often lacking programs for preserving the original image of the urban spaces. It should be noted that among the existing methodologies in Europe, there are certain common points that have been proven to be successful and suitable approaches to color treatments in historic urban spaces [3] (Fig. 1).

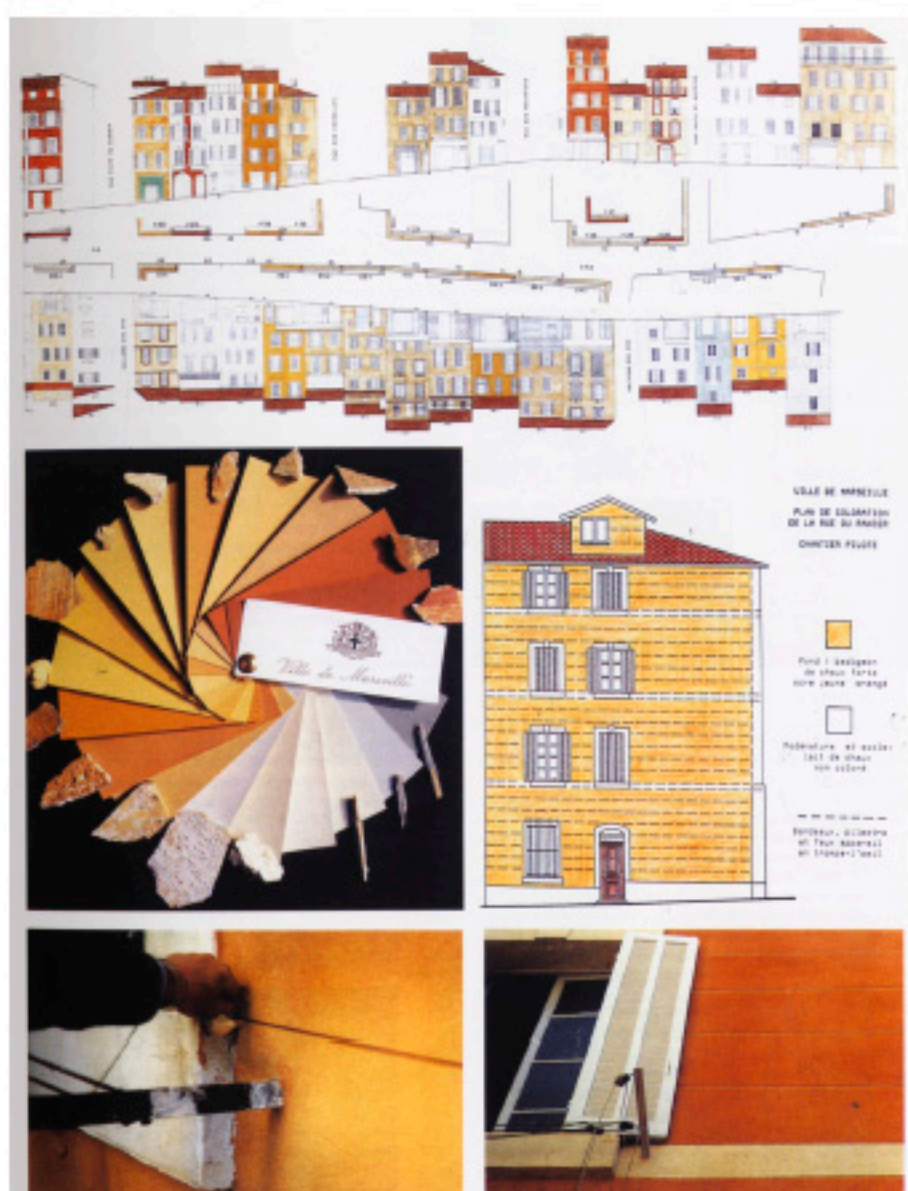


Fig. 1. Part of Giovanni Brino's 17-year survey of urban color in Marseilles, in this case, the quartier du Panier district. [Book image Colour for architecture today p. 34]

Color in architecture is not just a formal characteristic, but also a heritage value transcending purely aesthetic values to become an anthropologically cultural value, one deeply rooted in the collective consciousness that might even characterize the environmental characteristics of our cultures. In other words, each architectural era in history has its own color palettes derived ultimately from both the prevailing formal tastes as well as the available construction techniques.

In-depth knowledge of the social and cultural factors of a city's development as well as the prevailing aesthetic influences and available construction techniques are therefore vital for understanding the cultural and formal values of the historic city. Without in-depth knowledge of the characteristics of form and color of the buildings involved, any attempt at a formal urban restoration of the historic city is doomed to failure [2].

Color schemes represent the set of methodologies that allow us to learn about the urban setting of our cities. Certain color schemes have characteristics that are consistent with the buildings in each location, the urban space and the set of specific buildings whose formal and traditional logic are unique to each city. Changes in methodologies

are aimed at better determining more aspects that define its colors, with an emphasis on the stratigraphic analysis of the predominating materials in the buildings. At the same time, restoration techniques evolve as does the practice of using digital tools and, of course, new applied technologies, to help to carry out and monitor restorations [4].

Firstly, color schemes help the documentation process by studying the history of the city, the building or local tradition, the evolution of the city and consequently its transformations. In addition, the scientific interests of the working groups are increasingly interdisciplinary, combining fields such as archeology, history, sociology, architecture, anthropology, landscaping and design. Various kinds of methods, techniques, resources seeking to ensure each of the parts of which a strategic color scheme in the historic city is composed. This results in an enrichment when establishing the chromatic features of the architectural ensemble historic cities, for the purpose of guaranteeing a strategy based on coming as close as possible to finding out the original color of the buildings and the origin of their materials (Fig. 2).



Fig. 2. The colors of Baroque architecture (second half of the XVIII century) [Book *La couleur dans la ville* p. 100–101]

3 Studies and Applications

The studies based on finding out the peculiar characteristics of a place as the identity of the city mainly consist of certain color schemes based on existing evidence of colors peculiar to the area. History as the main object of study, the documentary and archival

sources based on the existence of maps and images serve as a representation, one produced from graphical descriptions of the cities [5]. The construction features, environment, space and territory found in graphic documents are of indispensable value. Illustrations, postcards or photographs showing each city's process of transformation, for example, have emerged over the course of the research process [6].

The ideas of composition, organization and distribution of urban spaces are the result of expansions and alterations to cities, as a result of rehabilitations. At the same time, the population growth in cities has brought new sanitation conditions and modifications to the color of homes in a way, for instance the whitening of cities due to the plague or contagious diseases. Historical and documentary sources attest to previous restorations processes that, together with studies about the original colors and variations appearing in recovered building manuals, provide us an account of past building practices.

At the same time, the sources provide continuous knowledge as to what resources, tools and work processes, crafting traditions and instrumentation were the basis of a highly innovative building industry from the nineteenth century. This has sparked interest and the adaptation of tools used in construction and the use of practical materials in construction and restoration.

Unquestionably, advancements in the chemistry industry toward using natural colors and new coloring have rapidly evolved to become the most current technology industries [7]. For this reason, new technologies ensure proper procedures and development of color charts, in which the original colors adhere to a previous stratigraphic analysis and color measurement based on international standards. The specific compositions for each place and urban space are, for the most part, the colors that identify the wall structures of the buildings. The color of each setting leads to the determination as to the historical colors, natural materials from each zone and place. This process entails interdisciplinary work, the key part of those studies, in which collaboration between other specialists and researchers are required in order to objectively agree upon the color proposals needed for all buildings and monuments. To control the technological instrumentation therefore requires one have the proper means and laboratories to carry out those studies.

Lastly, it is a crucial requirement to propose the harmonious compositions involved in the ensemble of historic centers, as well as the proper color schemes that identify the specific buildings. It therefore necessary to establish the most appropriate painting methods for the restoration activities performed on the buildings under study. These technology-based studies include an analysis of perception and sensation for best revealing the harmonies in the ensemble of the city or the canvas of the buildings [8].

4 Identity

One example of particular study is the *Study for the Recovery of Urban Areas of the Historical Center of Valencia*, an interdisciplinary project for intervening in the architectural heritage in order to restore the original image of the spaces of the city's historic center. This project beginning in 1995 and ending in 2013 consisted of a series of activities carried out by the Polytechnic University of Valencia as a research

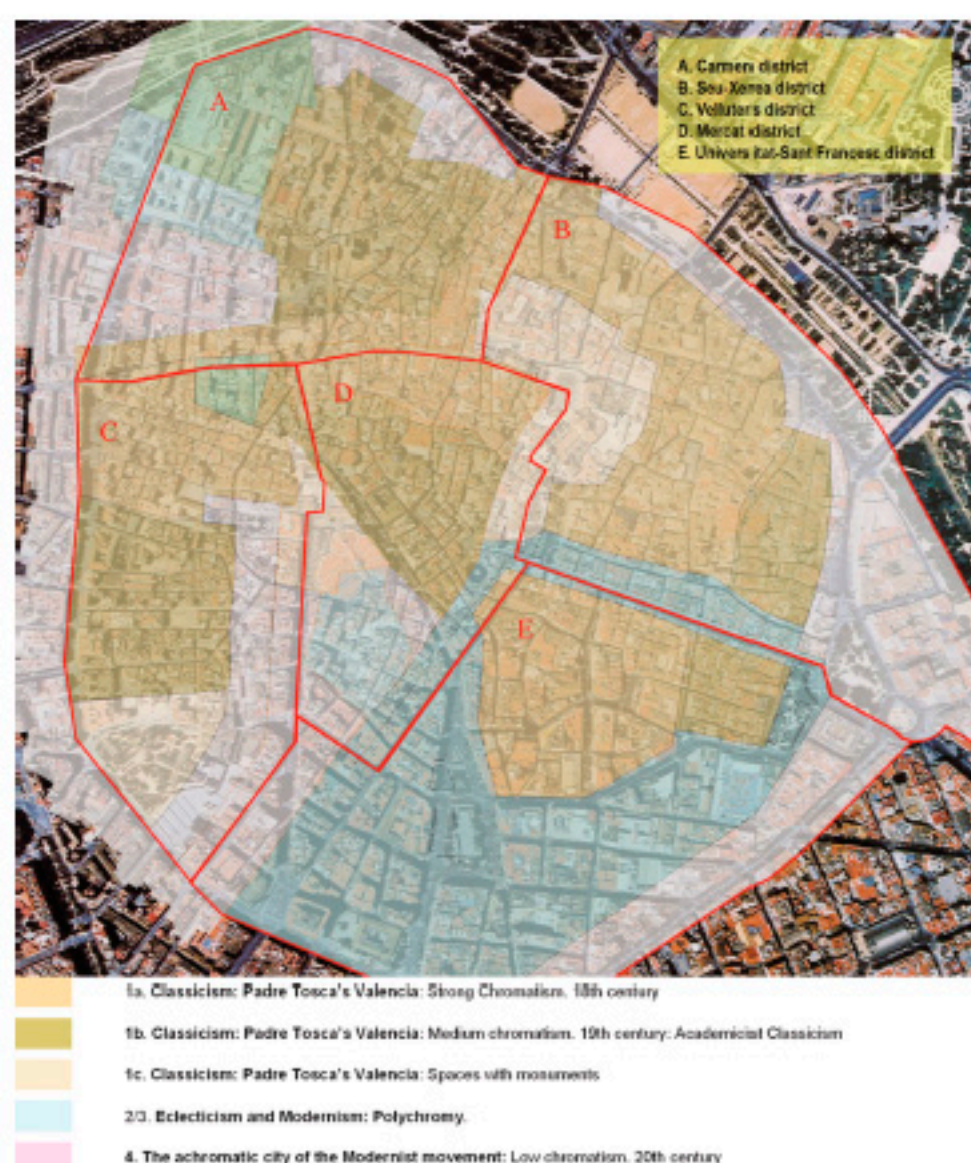


Fig. 3. Plan of color of the Historical Center of Valencia [Book *El color de Valencia: el centro histórico*].

institution and public administrations involved in the processes of regeneration and restoration of the historic center.

Through a confluence of scientific studies and awareness raising, the original formal and chromatic characteristics of the city's architecture were determined.

The aim of the project was to perform a dynamic restoration of the historical center of Valencia, which had deteriorated significantly since the flooding of the Turia River in 1957, the starting date of a progressive abandonment and deterioration of the historic center of Valencia, one Europe's largest at 1,730,000 m². In 1984, the Special Protection Plans for the 5 neighborhoods making up the administrative division of the historic center were approved. However, the absence of any formal conservation guidelines and an unrestrained processes of urban development carried out all along the Mediterranean coastline of Spain led to progressive depersonalization, and at times direct destruction, of the original urban image and a progressive deterioration and marginalization of the historic city's buildings [9].

It is in this context that a series of scientific activities began by the *Grupo de Investigación del Color* at the *Universidad Politécnica de Valencia*, with public support coming from public administrations through the Scientific Policymaking of the



Fig. 4. Plan of color of the Historical Center of Valencia [Book *El color de Valencia: el centro histórico*].

Generalitat Valenciana and from the Valencia City Council, with the aim of producing Color Plans for the historic center and carrying out policies for publicizing the direct involvement of the population in the processes for rehabilitating the original urban image.

The set of activities carried out since 1995 have led to the development of five studies to determine the original colors of each of the neighborhoods in the historic center, the culmination of which was the development of a Color Chart for each one and a general composite Color Chart for the city as a whole, which obtained the character of color standards required in rehabilitation processes. A study has been conducted to determine the building material characteristics of the plaster and facades in order to ensure building sustainability in the interventions. In addition, a series of pilot-interventions have been undertaken in order to both assess the viability of color and building proposal as well as implement a number of focal points spread throughout the entire historical center to act as centers of dissemination and awareness-raising among both the population and the agents involved in the rehabilitation processes, such as architects, developers and builders [10, 11].

As a result of everything described above, there has been a gradual recovery in the original colors of the city, initially generated in administrations, but gradually spreading to the private sector. The results are beginning to be seen in the historical center, where interventions of all sizes have gradually been adapted to the scientific guidelines, bringing about a progressive recovery of the urban image and its heritage values (Figs. 3 and 4).

5 Results and Conclusions

Color, the specific color ranges used in each period, is a part of the aesthetic logic underpinning the process of architectural design [12, 13].

Promoting respect for the traditional culture of our cities, awareness-raising and acting in an acceptable way by using justifiable resources for conserving the historical colors of cities capable of recovery. Historical and documentary sources that ensure any changes and restoration processes carried out over the years, along with studies about the original colors and variations used.

This process entails interdisciplinary work, the key part of those studies, in which collaboration between other specialists and researchers are required in order to objectively agree upon the color proposals needed for all buildings and monuments. Restoring color space as a sign of identity in the historic city must be treated as an indispensable part of the process of architectural regeneration.

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