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ABSTRACT

The article presents a case study in which urban color is taken as a protagonist element in the realization of a chromatic and artistic intervention for the preservation and/or recovery of the cultural identity of the selected area. The objective was to develop strategies of chromatic intervention in facades that allow the future empowerment and recognition of the identified areas, rescuing their own identity, legible and memorable, and betting on the identity definition in the collective imaginary through color, which is considered one of the strongest and most effective tools, of high value in the change of image and at the same time economic for the revaluation of the chosen areas. The approach contemplated the management and linkage with different sectors of the community (university, neighborhood councils, artistic collectives, businesses and municipal government) to define strategic instruments for chromatic intervention on the facades of a street in the historic center of Ixtapa, Jalisco, Mexico. To this end, participatory chromatic design proposals were contemplated, involving academics, students, neighbors, artists, businessmen and personalities representing the invited government sectors. As conclusions and findings, the article highlights the importance of studying and generating projects around urban color from a perspective that includes it as a symbolic element and protagonist in the shaping of cultural identity in the city. Emphasis is placed on how, when applied to selected architectural typologies, the chromatic design provides a clear syntactic reading, shaping in the collective imagination a system of memorable places as a product of an urban cultural construction. It also stands out that, in the case study presented, color and mural painting became starting points to improve the quality of life of the actors involved and contribute to the development and urban cultural construction of the locality.

KEYWORDS Chromatic Intervention, Urban Color, Architecture and Color, Urban Art and Color. Color and Cultural Identity.

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1. Introduction

Among all the senses, visual perception plays an essential role in the perception of urban space, and color is the most attractive part of it. (Dabbagh, 2019)

The chromatic study of a city, then, addresses the construction and perception of its colors as elements that make it unique and relate it directly to its cultural and historical heritage. This perception contributes to the reconstruction of a sense of belonging and local identity, but

at the same time reflects the multiplicity of its inhabitants and the elements of the collective culture. (Odetti, 2019)

This document presents a case study on the chromatic and artistic intervention of facades in the center of the town of Ixtapa, which belongs to Puerto Vallarta, Jalisco, Mexico. This intervention was carried out on two block faces of one of the emblematic streets of the area.

Figure 1 shows the location of the intervention area in the center of the town of Ixtapa.



Intervention area Hidalgo street between Juarez street and Independencia street

Ixtapa's main square

Fig. 1. Location of the intervention area

In the case of a town like Ixtapa, which is linked to an international tourist destination like Puerto Vallarta, the chromatic perception constructed by visitors is added as a variable; therefore, the color of a city with these characteristics is a reflection of the time lived and of the relationships established between inhabitants and visitors, from its past and projection towards the future.

The town of Ixtapa, Jalisco, belongs to the municipality of Puerto Vallarta. It has a population of 39,083 inhabitants (IIEG, 2023) and is 41 meters above sea level. It is a town with a nearby beach: the beaches of Puerto Vallarta are 12 km from this town.

The locality presents certain particular features, because although it is a town close to a tourist center, since its origins it has developed a cultural dynamic of its own identity, much more linked to the lifestyle of a traditional town in Mexico, than to the dynamics that came with the tourist scale of its nearby coasts.

Local and regional government institutions have been pivotal in establishing policies, providing resources, and facilitating citizen participation. Universities, research institutes, and experts in academia and research were able to provide technical expertise, feasibility analyses, and innovative approaches It also included the participation of the private sector, from the neighbors who owned the houses, a restaurant whose construction was symbolic of the locality, to construction companies and material suppliers, whose availability and support made it possible to carry out the chromatic intervention of the facades, providing financial resources, materials and technical knowledge. (Reyes González et al., 2024)

It is important to emphasize the specific characteristics of the chosen street for the project and the historical and symbolic significance of the building that inspired and shaped the project.

On the corner of Hidalgo Street is the restaurant "La Tienda Grande." The chef and businessman owner, along with his mother, who is originally from the town of Ixtapa, started talking with neighbors about the idea of improving the situation of the street. They sought an intervention that would allow them to rescue the historical value and cultural identity that Ixtapa had many years ago.

"The Tienda Grande" was the first convenience store in Ixtapa in the 1940s. According to neighbors and current restaurant owners, it housed the first telephone in the area, attracting people from the surrounding communities, including the coastal areas of Puerto Vallarta and Bahia de Banderas (Carrillo, 2023) [interview conducted by J. Odetti].

"The store was a gathering place for the community," recalls neighbor Rebeca Fernández.(2023) "Most of the houses on this street and the surrounding ones date back to the 1930s. My dad has lived in Ixtapa since 1933, when the store was inaugurated. When we approached them

about this project, all the neighbors said yes. When we thought about the colors, we pictured pinks, bougainvilleas, and Mexican pink - it made our hearts happy." [interview conducted by J. Odetti].

"Nostalgia, identity, and affection for the community. This project brought us backstories and emotions. Hopefully, it will continue with the rest of downtown Ixtapa." (Fernández, 2023)

Figure 2 displays the photographic documents used for the chromatic study and as tools in the in-depth interviews with neighbors and businessmen.



















Fig. 2. Historical photographs of old Ixtapa

These are examples of some of the conclusions, made possible through the methodology of citizen participation applied to the concept, planning, and execution of this intervention. Urban color becomes an evocative element, reminding feelings, and emotions, and creating meanings that reinforce the cultural identity of a street and open the door to future interventions in the nearby context.

2. Objective

The objective of this article is to present, through a case study, the analysis of urban color as a protagonist element in projects of chromatic and artistic interventions that represent a strategy for the preservation and strengthening of identity and urban cultural construction.

As specific objectives to carry out these proposals, it was proposed to identify the construction of socio-visual - territorial and chromatic perceptions of the urban space to be intervened in, to analyze and characterize from the qualitative study of urban image analysis the chromatic dimensions of the different zones selected for the intervention and to integrate the key actors in the conceptualization and implementation of the proposals of chromatic and artistic intervention in the selected areas.

3. Method

The research design corresponded to a qualitative study with an interpretative and action research perspective, which considered the analysis of the meanings attributed by the research subjects to the case study, seeking to interpret the construction of meanings by applying the various instruments selected.

Through the combination of qualitative and quantitative analysis methods of urban color research, the specific characteristics of color in the locality were explored as a basis for the proposed chromatic and artistic intervention of Hidalgo Street in the historic center of Ixtapa, Jalisco, Mexico.

All this to contribute to the cultural construction of the city, boost tourist activity, stimulate economic vitality, and satisfy the feeling of belonging and identity.

During the period between August and October 2023, fundamental actions were carried out for the execution of the intervention that involved a significant collaboration between educational institutions, neighbors and businessmen. The project's main idea was based on the concerns of local businessmen and neighbors of the street to be intervened; together with them, we worked on the

definition of the objectives and scope of the planned intervention on the town's facades.

A total of 80 architecture, design, and visual arts students from the two local public universities were invited to participate in designing and executing the intervention.

In addition, two participatory workshops were conducted with businessmen, neighbors, teachers, and students to collaborate on the concept, socialization, and definition of the project.

The perceptions and cultural constructions of color in the area were also analyzed in order to develop the chromatic and artistic intervention proposal.

In order to document and contextualize each stage of the process, an exhaustive photographic and videographic record was made.

Visual coverage was maintained throughout the development of the project, providing a valuable tool for evaluation and retrospective analysis. Dissemination of progress and achievements transcended the local level, as a media campaign was carried out in the local press, highlighting the relevance of the initiative and its positive impacts on the community. In addition, the project was actively promoted at academic events, consolidating its visibility and recognition in different specialized circles. This set of actions evidenced the effectiveness and comprehensiveness of the planning and execution of the project during this specific period (Reyes Gonzalez, et al., 2024).

The techniques and tools selected were varied. Documentary and field research were conducted,

including interviews with long-term neighbors, and analysis of historical documentation and photographs provided by the neighbors.

The action research involved neighbors, business people, and students to determine and analyze the main color characteristics present in the collective imagination of the street residents and the photographic records collected.

From the cartographic analysis, a survey of the area and the street to be intervened was carried out, with analysis and drawing of each façade, observing its state of conservation, identifying its main architectural elements and possible elements to be rescued as elements of heritage and cultural identity.

Two participatory workshops were conducted with neighbors, businessmen, students, and teachers to study qualitative variables. In-depth interviews were also documented and analyzed.

The instruments selected were: field files; drawings of urban images; geographic information systems; interview formats; participatory workshop formats; and questionnaire formats. Generation of chromatic palettes. Generation of chromatic harmonies that were applied in the chromatic and artistic interventions.

All the analysis of the chromatic palettes and harmonies generated was conducted using the Natural Color System. [1]

Table 1 outlines the methodological process of the intervention project and its analysis.

Methodological Process							
Background	Hypothesis	Kind of Research	Techniques	Instruments	Units Analysis	Dimensions Analysis	Indicators
Urban color	The needs and	Qualitative	Documentary and	Field files; drawings	Facades,	Color palettes	Color and
of	concerns	study, with	field research	of urban images	furniture and	Chromatic perceptions.	facades,
Architecture,	of neighbors and	an interpretive	Action research	Geographic	urban	(identity, feelings, time,	ornaments,
Urbanism,	businessmen link	perspective	Cartographic análisis	information systems	landscape.	places,	materials,
Design.	color with their	(the explicit	Participatory	Interview formats	Subjects:	landscape	color palettes
Analyzed in :	knowledge,	aspects,	workshops	Participatory	inhabitants	and architecture)	with meanings,
Photographs	expressed in	conscious,	Photo shooting,	workshop formats	and		sentiments and
period	chromatic values,	implicit	Color Scan,	Questionnaire	businessmen.		narratives
In-depth	experience,	and unconscious	Qualitative surveys,	formats.			
interviews,	multiplicity, and	subjective reality	Interviews and	(NCS) Chromatic			
Rescue of	perception as a	is under study)	visual ethnography	palettes. Chromatic			
life stories.	result of urban			harmonies			
	cultural						
	construction.						
1							

Tab.1. Methodological process of the intervention project

By including in the methodology of this project the participatory space in the planning, design, and self-

management of the intervention, the experiences of its inhabitants, and how they interact and coexist with the colors

were involved. The possibility of choosing a palette of colors to intervene in their living space generated the opportunity to make visible their streets, their squares, their buildings, the natural context, their facades, and their textures.

As a last step in the methodology, an evaluation interview instrument was applied to the 16 neighbors who own the intervened facades three months after the intervention was carried out to gather their opinions and evaluations regarding the project and its impact on their perception and coexistence with color in their urban experience.

The proposal for the chromatic intervention in Ixtapa was based on the idea that color is a key visual element that shapes the urban image and contributes to the expression of cultural identity and urban life. The design process included elements aimed at sustainable development, such as social participation and the involvement of community members.

4. Results

The case study focused on creating a chromatic and artistic intervention for a prominent street in downtown lxtapa. Students and professors interviewed neighbors and business owners of a restaurant located in a significant building in the area. The goal was to understand their concerns, preferences, and needs regarding adding

harmony and color to the street. The aim was to enhance the urban image, emphasize the street's identity, and execute murals in the restaurant as part of the project.

The initial challenge of this project was to collaborate with neighbors and business owners to choose the colors for the project. This involved two participatory workshops and in-depth interviews. Specialist teachers provided guidance on chromatic harmonies, color theory, and visual effects of colors in the urban environment.

In a collaborative work, neighbors, teachers, and businessmen chose to start with the selection of colors, based on the analysis of photographs as historical documentation and on the previous work that had been done for the selection of colors for the brand of the restaurant located in one of the emblematic buildings of the area.

It should be noted that for the chromatic design of the brand 'La tienda Grande', we had previously worked with qualitative color study tools, which related them with the life stories of the chef's mother and the chef himself, both lxtapa's neighbors, as well as with the identification of colors related to the gastronomy of the place and the traditional architecture of the town.

Figure 3 illustrates the process of selecting the color palette to initiate the participatory workshops and the development of the color proposal.



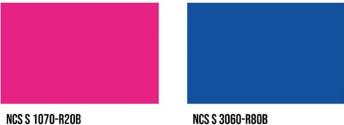


Fig.3. The initial color palette and the two colors with which neighbors, businessmen, students, and teachers began to work the chromatic harmonies for the intervention.

During the two participatory workshops, the pink color NCS S 1070-R20B was selected as the protagonist for realizing the first color harmonies and presenting the proposals for application on the facades.

Subsequently, as can be seen in Figure 3, the proposals of chromatic harmonies based on the color theory of Johannes Itten were worked on, starting with the selected color, pink NCS S 1070-R20B, around palettes of analogous, monochromatic, composite, tone, desaturated and alternate colors.

In a new meeting with businessmen and neighbors, monochromatic harmony was selected as the basis for the entire chromatic intervention proposal and for the execution of the artistic murals on the façade of the emblematic restaurant. Figure 5 shows the selected chromatic palette applied to the chromatic design of the street for the intervention.

As a structural framework for the practice of the final chromatic

design, compositional criteria were considered, integrating a dominant color accompanied by subordinate and accent colors. In this context, the following colors were applied:

The dominant color, NCS S 2060 R30B, played a leading role in defining the communicative values of the chromatic combination. It functioned as the central axis and gave visual coherence to the intervention.

As for the subordinate color, the colors NCS S 1070 R20B and NCS S 1060 R30B were chosen. These colors, visually more subdued, fulfilled the function of contrasting or complementing the chromatic combination, providing nuances and depth to the intervention.

Finally, the accent colors, NCS S 6030 R30B and NCS S 2065 R20B, added a distinctive and striking touch to the composition. These colors not only provided visual tension within the color scheme but also contributed direct visual details, enriching the aesthetic experience of the chromatic intervention on the Ixtapa facades.

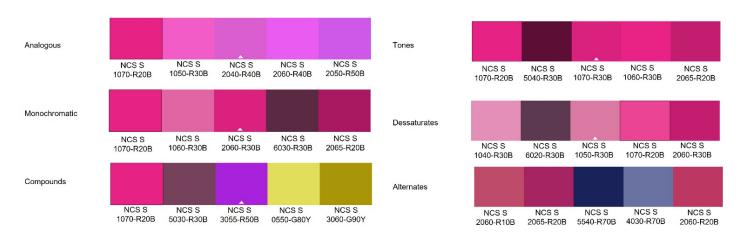


Fig. 4. Chromatic harmonies' proposal

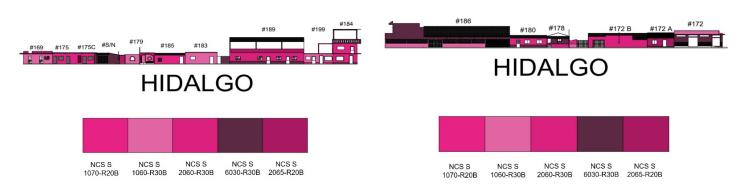


Fig. 5. The monochromatic palette proposal was applied to Hidalgo Street.

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With all this defined, all the technical files were generated to organize the work and the execution of the chromatic intervention. Parallel to this, the students of visual arts, together with the students of design and communication, interviewed neighbors and businessmen to rescue the traditions and history of the building in which today's emblematic restaurant and generate with it the proposal of themes for the artistic murals that would intervene the facade of the restaurant.

The exercise of designing the murals and their final application and execution was a new learning experience, in this case, for the visual art students, who had to adjust their designs and execution to a restricted chromatic palette, which also allowed them to think about color and its integration from the scale of the sketch to the large format of the mural, but also to the integration with the rest of the urban chromatic design.

Figure 6 shows the final result of the execution of the intervention. Here we can see how all the key actors participated in all the stages of the project, since they also had the experience of painting, coordinating as a team, and generating from the community work a solidary contribution to the community, recognizing at the very moment of the application of the paint the power of transformation of the perception and aesthetics of the urban image through design and color.

It is worth noting that after the chromatic execution, as shown in Figure 6, the multimedia design students developed a video in which they captured the stories that neighbors, students, teachers and businessmen were able to share about this experience, narrating anecdotes from before, during and after, as well as reflecting on the entire project carried out.



Fig. 6. Images of the process of chromatic and artistic intervention on Hidalgo Street, with the participation of neighbors, teachers and students.

As a final step, an evaluation instrument in the form of a semi-structured interview was applied to each of the participants, 80 in total between students and teachers and the 16 owners of the intervened facades to reflect on the opportunities, successes, challenges, and strengths of the project, as well as to record the impact that, a few months after its implementation, the chromatic intervention has generated in the community.

The results of these interviews highlighted the following:

Figure 8 shows the comments regarding the general perception of the project and the degree of satisfaction of those involved with the project. Where it is possible to

observe, for the most part, the positive perception of the results of the intervention, the fulfillment of its purpose, and the desire to be able to continue supporting or participating in similar projects for the neighborhood. It should also be noted that in the selection of the themes for the artistic murals, the great majority felt very satisfied, as well as in the improvement of the urban image produced by the chromatic intervention. Regarding the choice of the chromatic palette, opinions were divided; some of the interviewees expressed other chromatic preferences, but they understood that the choice was due to the history of color in that street and its relationship with the identity of the locality.

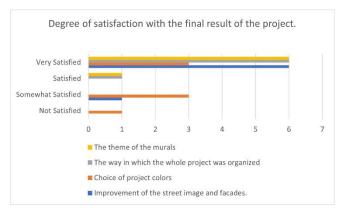








Fig. 7. mages of the in-depth interviews were realized and edited into a promotional video for the project.



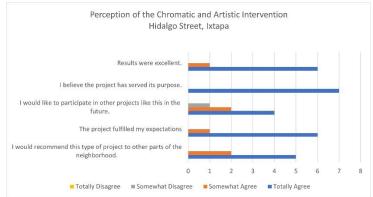


Fig. 8. General perception and degree of satisfaction with the final result of the chromatic and artistic intervention project.

Next, the interview form included some open-ended questions regarding the aspects they liked most about the project and the feelings, sensations, emotions, or stories that the project had provoked in the interviewees. The most outstanding contributions with their keywords are included in Figure 9.



Fig. 9. Keyword cloud of qualitative appraisals of the project and the perception of the project by the interviewees.

In the graph presented, we can observe appreciation and associations of the chromatic intervention with certain predominant emotions, such as joy (directly related to the power of color as a communication element and mood stimulator). Words such as identity, revaluation, and attention, which are related in the messages of the interviewees with the power of color and chromatic intervention to revalue the urban image of the street and rescue the symbolic aspects of culture, such as those related to identity and sense of belonging, also stand out.

5. Discussion

In the current context, many cities and regions attach great importance to forming an urban image based on the study of color to develop a sustainable urban life. It is widely recognized that the research and urban proposals of color contribute to stimulating the city's vitality, preserving the history of its localities, and contributing to the sustainable development of urban culture.

From the economy, urban chromatic design can promote tourism (Smedal, 2019); from the social aspect; the use of color can promote social interaction

strategies, revitalize urban areas and improve the sense of belonging with the built environment and the urban landscape (Boeri, 2017), (O'Connor, 2023).

It is interesting in this sense to rescue the element of citizen participation in this project, to achieve an impact in more than one of these aspects.

Even though the project was only able to become a reality in one street of the locality, the exercise can set a model to manage other interventions in other streets of Ixtapa and other areas of urban border context in a tourist city such as Puerto Vallarta.

From the visual-perceptual approach of Jean Philippe Lenclos (2004), who introduces the concept of 'geography of color', this project manages to point out how the specificity of the traditional colors built (in this case from the chromatic study of an emblematic construction, as was 'La Tienda Grande', is closely related to the environment, regional differences and, above all, with the use of local building materials.

Therefore, from the intervention and urban chromatic studies, the signs of identity of a place can be reinforced, cultural landscapes can be built, and cultural diversity can be respected from the design, incorporating elements and colors based on their cultural studies. (Lenclos, 2004) (Spillmann, 2019) (O'Connor, 2023)

Thus, in this work, we propose to put special emphasis on the study and proposal of chromatic and artistic intervention in the selected case, as a visual element of the urban image and as a component of identity formation and symbolic expression of urban life.

From sociology and urban anthropology, the concepts of perception and color in the city are studied through the conceptions of cognitive-valuative systems that develop in urban contexts and that are the product of cultural dynamics, such as the processes of urban cultural construction (Signorelli, 1999).

In a similar sense, Wirth Louis (2011) explains how the city can be'read' from different configurations that involve urbanism as a way of life and highlights for this purpose the particular characteristics of a city from its physical structure, its system of social organization, and the set of attitudes and ideas that participate in the collective behavior and the symbolic construction of the city.

In the case study presented, this is evident from the previous concerns expressed by neighbors and businessmen to the evaluation of the impact of the very particular chromatic palette selected, and the emotions and sensations that this has provoked, both in the inhabitants and in those who begin to visit the street that is currently known as 'pink street of Ixtapa'.

Along the same lines, Veronica Zybaczynski (2016) highlights the importance of works that include the rescue of color as an element of identity, underscoring how each color response in the city is a design and that this response is due not only to the justification derived from history and from a pre-existing, but from a goal of the power of color to resolve the contradictions dictated by the transformations of the city, which involve both the historic urban fabric and the suburbs.

An example of this has been the opinions and concerns of the locals and entrepreneurs, who in the participatory work, for example, expressed their desire to "include colors, reminiscent of Mexico, something warm, colors that remind us of Mexican cuisine and particularly of the traditional recipes of the families of Ixtapa, mainly of the neighbors, women who pass the recipes from generation to generation and who come to inspire the chef of the restaurant" (Carrillo, 2023).

This is how neighbor Rosa Isela Medina (2023) described it: "The colors of Ixtapa are characterized by their vibrant colors and pink is very present, for example in the bougainvilleas (flowers that abound in the decoration of the houses in the area) and with which teas and drinks are also prepared. [Interview by J. Odetti].

Also in the workshops, from the training offered by the teachers and the observation of the participants, it was possible to highlight how pink appears as a significant Mexican color element, which can be found in numerous examples in Mexican architecture and the history of art, with paradigmatic artists and architects such as Luis Barragán, Ricardo Legorreta and his disciples, as well as in Jalisco in the work of plastic artists such as Chucho Reyes. As Anna Marotta (2011, p 119.) comments "The influence of Chucho Reyes was decisive for Legorreta in his use of color and fusion with popular arts, although his use of color could seem intuitive and free".

All of them are symbols of the power of color in a country where it is abundant in every corner, from natural and gastronomic manifestations to celebrations and expressions of culture.

One of the conclusions of these desires, inspired by the work of the workshops, was overwhelming: "May Ixtapa be painted pink".

From the methodology used, there are two aspects to highlight as successes, one is the inclusion of citizen participation throughout the exercise, which can be linked to the elements that constitute the objectives of sustainable development, to integrate them into the design process, specifically social participation in the development and integration of key actors in the community.

And secondly, the concept of chromatic and artistic intervention of facades, a concept that with the passing of time has begun to gain popularity, not only in Ixtapa but also in other zones of the periphery of the city of Puerto Vallarta. From municipal authorities to neighbors of different zones are beginning to pay attention to this methodology as a possible method to detonate developing zones and rescue forgotten or abandoned urban areas for not belonging to the traditional tourist circuits.

In this case, most of the initiative was led by young entrepreneurs and some neighborhood leaders of the street, but the municipal authorities, for example, were not present. Ideally, it would be hoped that in new interventions this alliance between neighbors, entrepreneurs, students, and academics would be enriched and accompanied by the municipal or state government sector, depending on the degree of impact sought.

Finally, it is also necessary to observe the scale of the project, since it has been an intervention carried out in a peripheral zone of a tourist city that is characterized for being a sun and beach destination, but that is part of a country, like Mexico, where the projects of rescue and design of the urban color have different dimensions.

From the rescue of historic centers that can be declared World Heritage Sites (such as the case of the City of Zacatecas, or Guanajuato, in the center of the country, or Campeche in the Mexican Southeast, etc.). Even initiatives led by non-governmental organizations that use color and urban art to dignify or strengthen the social fabric of popular areas that are suburbs of large cities, such as the example carried out in Santa Catarina in Nuevo Leon, by the Association Civil Corazón Urbano AC.

All of them are examples of how color is lived, felt, signified, and experienced in diverse city contexts, but in which it becomes an element of urban cultural construction.

7. Conclusions

In this article and with the case study presented, we intend to highlight the reflection on the role of color as a protagonist element of life in the city, evocative of emotions and perceptions, which, when taken to the scales of intervention in the urban image, can account for the processes of the cultural construction of the same by all the actors involved in the experience.

It is also important to highlight the study of urban color from a perspective that opens our gaze and positions us as subjects who experiment with colors. In this sense, color becomes an evocative element of countless meanings, with which we can narrate, express, communicate and give meaning through the various disciplines that consider

it as a protagonist element and ultimately as an element of cultural identity in the city.

On the other hand, the advances in chromatic works that begin to include the subject of the perception of its inhabitants in Latin America represent an opportunity to reflect on the complex realities of the Latin city in general and on the multiple chromatic scenarios that account for a cultural richness and an experience that is not only objective and linear but is built with the passing of time and becomes more complex with the participation of those who transit and live the city. (Odetti, 2019).

An essential aspect to contribute this case to the studies of urban color has been the concept of chromatic and artistic intervention, where color and art are conceived as transforming elements of life in the city. This, together with the participatory design methodology, highlights the voices of those who participated in the intervention, the meanings that this project denotes in the inhabitants, in the students who participated and collaborated, in the initiative of the businessmen, and in the experience of linking the university with the community.

Thus, in the project presented here, the most relevant aspect is how color and mural painting became protagonists and starting points to improve the quality of life and highlight the values of cultural identity in the community. In addition, the students of both universities involved in the project benefited from their learning processes and contributed directly to the development of the locality.

Another interesting aspect to rescue for future interventions and methodological reflections on the study of urban color has been the multidisciplinarity, which the project included.

The richness of studying and intervening chromatically with a street of a locality, with diverse looks and different languages, such as the chromatic design itself, the themes and styles of the murals, and the previous and later process of documentation with the videos, the rescue of the oral history that could be registered in them and the multiple ways of documentation used, to be able to think about color from a multiple, diverse and uninterrupted perspective.

8. Conflict of interest declaration

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Notes

[1] The Natural Color System (NCS) is a psychometric model for color description and also a practical application of Hering's opponent-color theory. (Hård & Sivik, 1981)

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