



Article Memory and Identity: Citizen Perception in the Processes of Heritage Enhancement and Regeneration in Obsolete Neighborhoods—The Case of Polígono de San Pablo, Seville

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Abstract: The designation of which resources are valued as emerging heritage is at a turning point. This has resulted in urban heritage regeneration processes designed from the top down, neglecting the perception of the local. This article highlights the importance of generating participatory multi-actor spaces where the knowledge of agents involved in the same process of urban regeneration, in this case linked to heritage in obsolete neighborhoods, can be incorporated and contrasted. The San Pablo neighborhood in Seville, built in the 1960s, is chosen as a case study. Actor–network theory is taken as a methodological basis for articulating a network with the voices of agents involved in heritage regeneration processes in obsolete neighborhoods. A methodology designed from the bottom up is put into practice, having as a base the social agents, followed by the academy, and finally with the technical knowledge of official institutions. This research concludes that incorporating the elderly population as social agents in regenerative actions in the San Pablo neighborhood is a determining factor in characterizing its uniqueness. Collective memory naturally associates resources that are part of the social identity of the neighborhood. Due to its deep roots, the older population recognizes different elements that could be protected and possibly recognized as emerging heritage, and that technical agents should consider them to achieve sustainable regeneration.

Keywords: citizen participation; social perception; contemporary heritage; urban obsolescence; social mapping; actor–network theory

1. Introduction

Most cities in Spain have a residential fabric built throughout the 1960s, defined predominantly by sprawling working-class housing estates, which were located on the outskirts of the main cities, and Seville was no exception.

In the case of Seville and other major cities in Spain, these residential estates were not fully developed until the middle of the 20th century as the only possible alternative to the endemic housing shortage suffered in urban populations [1,2]. At the beginning of the 1960s, the Gerencia de Urbanismo ceded the land for the construction of the Polígono de San Pablo to the Instituto Nacional de la Vivienda, where the Obra Sindical del Hogar y de Arquitectura would be responsible for its planning and execution [3]. The project was to be located on the northern outskirts of Seville, on the road to the airport and the exit to Madrid. Its construction would provide the city with 11,500 dwellings, grouped into five neighborhood units, which would be connected to each other through school zones and the neighborhood nucleus, where the religious, social, and commercial centers would be located [4].

The typology with which these residential estates were built differs significantly from the needs of contemporary living. The typological question has a relevant role in the obsolescence of dwellings, which differs from the needs of contemporary habitation,



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Copyright: © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). in urban regeneration processes, and should be considered a priority [5], regardless of technical issues, incorporating its heritage dimension.

Therefore, the objective of this article is to highlight the use of a participatory methodology in heritage regeneration processes, where social perception is central to characterizing obsolete neighborhoods, as opposed to purely technical studies [6,7]. The theoretical framework of this research provides a reflection on the impact of incorporating citizen participation in urban regeneration processes, particularly from a heritage approach [8,9]. Participatory tools make it possible to intercept sensitive issues such as welfare, community cohesion, and social inequalities [10]. The San Pablo neighborhood is presented as a case study, where, through the creation of spaces for citizen participation and with the support of experts and technicians, the local population has identified community resources or situations that, because of their deep roots, can be considered locally for their protection. In these spaces, work has been done with citizens with identity values through architectural, urban, and social aspects.

In 2021, the University of Seville (U.S.) Solar Decathlon interdisciplinary team, as a knowledge-generating agent, developed the project "Direct application of the SOLAR DECATHLON-U.S. TEAM Aura Strategy in the rehabilitation of obsolete neighborhoods". The San Pablo neighborhood was proposed for its development and application [6,7]. The social, urban, and heritage scale will be addressed throughout the investigation. This project was supported by the Andalusian regional government's Ministry of Development, Infrastructure and Planning (Consejería de Fomento, Infraestructuras y Ordenación del Territorio de la Junta de Andalucía).

In obsolete neighborhoods, as in the case of San Pablo, the singularity of the possible emerging heritage lies in the fact that these elements have formed part of the social identity for more than 50 years, and, at the same time, they are spaces that have allowed the creation of neighborhood relationships, as well as the consolidation of those that previously existed at the time when San Pablo began to be inhabited.

To analyze this issue, the article offers a theoretical framework that characterizes the theory and methodology applied to the development of participatory workshops. From actor–network theory, the opinions that agents such as academia and official institutions value for the recognition and protection of emerging heritage are contextualized [11–13]. However, the methodology applied to the case study, being interdisciplinary and multi-actor, allows recording and giving voice to the knowledge transmitted by the elderly population residing in the San Pablo neighborhoods [8,14]. It is on their participation that the strategies to be implemented depend.

Finally, the results obtained in each of the activities developed in the participatory workshops are presented. It is important to generate participatory spaces where the resident population, academia, and official institutions can present their arguments and positions in relation to urban regeneration processes. This strategy can promote sustainable alternatives to the recognition of emerging heritage at the neighborhood level.

2. Theoretical Framework

At the European level, collective housing estates are one of the main urban landscapes associated with post-war urban development. Currently, these urban fabrics face a generalist critique from those studying modern architecture. However, this situation does not solve the architectural and social problems present in these neighborhoods [8,15–17]. The obsolescence of these housing estates has led different actors to become involved in regenerative actions, but most of them focus on the regeneration of the urban environment as a solution to current problems [16,18].

Since the beginning of the 20th century, Spanish cities have undergone growth and urban redevelopment as a result of industrialization processes [19]. This resulted in constant migration from rural environments to the city, which produced overcrowding, mainly in the periphery, as well as in degraded areas. This situation was repeated in the main industrialized Spanish cities, which were forced to evolve through a new approach to

urban fabric, where high-rise neighborhoods were seen as the new paradigm of the urban landscape [20].

Due to the historical uniqueness of these neighborhoods, different authors agree that for a regenerative strategy to be sustainable over time, it must be interdisciplinary, inclusive-participative and multistakeholder [21,22]. To respond to the shortcomings of these neighborhoods in terms of their obsolescence, the strategies must respond in an interdisciplinary manner, since they are associated with urban, architectural and social values [17,23,24]. As they are inclusive and participatory strategies, the local population plays a determining role in the identification of local problems and the proposal of sustainable solutions. Being multistakeholder strategies, they should incorporate the different voices involved in the process of defining solutions [12,13,23,25].

Regenerations focused on urban values must take into account that the growth of cities indirectly exerts the destruction of this typology of architecture [26]. Therefore, the processes associated with the recovery of urban spaces must be linked to collective memory and the construction of social relations [17]. On the one hand, urban regeneration can stop being a physical and architectural process to become a staging of new images that are valued as part of the heritage of a contemporary city [21,27]. In this regard, international institutions such as ICOMOS (International Council on Monuments and Sites) and DOCOMOMO (Documentation and Conservation of Buildings, Sites, and neighborhoods of the Modern Movement) work on the guardianship of modern architecture made between 1925–1965, since until recently housing estates were scarcely valued resources [28]. Therefore, culture and heritage play a relevant role within revitalization processes, which allows the implementation of urban regeneration actions, through the recognition and safeguarding of local heritage [9,29].

Through a heritage reading, official institutions such as the World Heritage Committee (UNESCO), as well as the ICOMOS (International Council on Monuments and Sites) and the Iberian DOCOMOMO, and in the case of Andalusia, the Andalusian Institute of Historical Heritage, recognize that the development of this housing typology responds to urbanistic and functional principles of the modern movement. Due to their unique history, architecture, and social character, these housing complexes are likely to be recognized as an emerging heritage [30,31]. DOCOMOMO Ibérico recognizes that architectural resources built between 1925 and 1965 can be considered within this category. Due to its origin, the emerging heritage carries identity values, which reflect the historical and social period in which they were built [32].

On a more social and urban scale, the technical view that emerges from the academic sphere is a binding axis between official institutions and citizens. Through research and fieldwork, academia brings together and adds knowledge from the social groups with which it works. Incorporating the perception of residents is decisive, as it is they who most clearly recognize the resources within their neighborhood that can be considered for safeguarding [33].

Regarding architectural value, the constructive typology of these housing fabrics presents a deficit in terms of needs related to health, comfort and energy poverty [14,16]. These residential areas have a value that is little considered in regenerative processes—the social value—so it is necessary to advance criteria to protect them [34]. Failure to consider the collective memory of the older population represents the loss of those social values that have been able to communicate in an urban environment [15,16,35]. The inhabitants of these neighborhoods are agents responsible for narrating and representing their experiences and the importance of the urban environment in their daily lives [36]. This multiplies the possibilities of implementing an urbanism that will be democratic, open, and participatory [14,36].

To approach this research, actor–network theory [11] is taken as a basis, addressing through a constructionist and ethnomethodological approach the construction of a record of the networks of actors involved in the same objective [22,26]. In addition, this theory examines the processes by which individual scientific claims are supported, debated, and constructed by determining the interactions, connections, and activities of the actors [22,37]. In the definition of interdisciplinary regenerative strategies, mapping of the links between actors involved in the process is crucial to understand the different voices and positions [12,22,37].

As a participatory tool, collective mapping through social mapping is a multidisciplinary research tool [11]. Its application allows one to obtain concrete information from the different actors involved with the transformations in a neighborhood [8,11,12]. The creation of social spaces is the means for the local population to be integrated in the processes of exchange of ideas and consensus [38,39]. Knowledge of a population that inhabits a neighborhood is key for official agents, such as the government or official institutions, to understand the realities of a particular neighborhood [40,41]. The "place" is constructed from the ways in which people relate to and inhabit their territory [42]. Finally, experiences and collective memory are part of a knowledge matrix [8,13,37]. This hypothesis contributes to the debate on interdisciplinary relationships that address research on the regeneration of a neighborhood and its environment [22,36].

The participation of civil society is determinant for decision-making at the neighborhood level, especially when it comes to heritage resources [43,44]; these act as local agents, who identify in the habitat environment the urban, social, and ephemeral elements, which hold a significant value for the population [43,45] either by historical representation, cultural, and identity rootedness or as part of a collective memory at the neighborhood level [40]. The participation of older adults and their considerations revolve around urban facilities that allow them to maintain a good quality of life according to their age. Cities that grew along with the industry of the mid-20th century show problems associated with climate change, urbanization, and population [46,47]. This urban and housing fabric demands changes at the social, economic and political levels and, above all, a transformation of urban equipment, in correlation with the local population aging process [48,49].

This research provides an interdisciplinary point of view, based on actor–network theory [11]. This article highlights the importance of generating participatory multi-actor spaces where the knowledge of agents involved in the same urban regeneration process is incorporated and contrasted to generate sustainable solutions. In this case, the knowledge and perception of the elderly population is incorporated into the recognition of resources that, due to their deep roots, can be considered part of the emerging heritage.

3. Methodology

The objective of this research highlights the importance of designing a participatory methodology in the urban regeneration of obsolete neighborhoods. Social perception is the central axis of characterization of the local heritage by the resident population of the San Pablo neighborhoods. The following is the bottom-up participatory methodology that comprises the development of participatory workshops, and finally, through the actornetwork theory, the opinions of the agents involved in the urban regeneration of the San Pablo neighborhood are characterized: local population, academia, and official institutions (Figure 1).

Returning to the objective of this article, the following is a description of the design of the participatory multi-actor methodology [8,21,37], as well as the application of the actor–network theory [11,12,22]. The design of the participatory workshops was oriented to the elderly population of [36] residents of the San Pablo neighborhoods; their knowledge and perception are key in the recognition of resources that can be considered an emerging heritage.

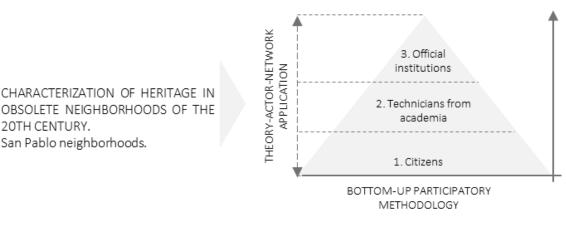


Figure 1. Working methodology. Source: own elaboration.

This activity provides a space for dialogue in which it will be possible to identify those elements that citizens consider part of the local roots, and which deserve to be made visible. The activities developed in the participatory workshop in San Pablo are a methodological transfer of the project "Revaluation of the Cultural and Natural Heritage of the city of Cuenca based on sustainable development strategies supported by the Historic Urban Landscape Recommendation (PUH_C)" [44]. The referred work addresses methodological construction using the approach of the recommendations issued by UNESCO on the Historic Urban Landscape (2011). For this reason, the first step was to adapt the methodology and the work material to the context of the San Pablo neighborhood. It consists of four activities that guide participants in the process of identifying the resources or elements that are most significant to them through social mapping [38,39].

The development of this research is part of the project "Direct application of the Aura Strategy of the SOLAR DE-CATHLON-U.S. TEAM in the rehabilitation of obsolete neighborhoods". The development of the workshops, the methodological construction, and the presentation of the results were overseen by the interdisciplinary Solar Decathlon team of the University of Seville (U.S.).

The participatory workshop was organized around four activities through which the local population, through perception and senses, recognizes and gives visibility to urban, material, and ephemeral resources rooted in the identity of the neighborhood [46,49,50]. The information obtained was grouped for analysis into the following categories: culture and co-existence, urban equipment, and public space. These themed categories coincide with the scales of work of the "Aura strategy" project: urban, built, housing, and social and heritage.

3.1. Participatory Workshop—San Pablo Neighborhood

From the academy and through participatory processes, members of the Solar Decathlon team together with those responsible for the Alfonso de Cossio Senior Center coordinated a series of participatory workshops with the population of the San Pablo neighborhood, to recognize through their perception those resources that, due to their historical importance, are linked to the memory and identity of the neighborhood. The participatory methodology made it possible to get to know the reality and environment in the older population of the San Pablo neighborhood. They are the ones who have lived the moments in which the neighborhood has been transformed over the past 50 years, and their knowledge is part of the ephemeral heritage that is socially preserved in the identity of the San Pablo neighborhood.

In order to define the workshops, the phases proposed in the participatory methodology were considered (Ferrándiz et al., 2019; Montañés & Rodríguez Villasante, 2009 [51,52]), establishing the techniques through which to develop each of the four parts that make up the workshop; the initial negotiation between the participating agents—academia, local society and representatives of official institutions; a strategic map of how to approach the organization of the participants; the active listening of multilevel agents and the social creativity workshops were at the core of the activity, being where the information from the participants is collected; the prioritization of proposals, as the result of the analysis made by the Solar Decathlon team, prioritizing the information presented by the participants.

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Activity 1. Elements of identity and well-being in the neighborhood. Based on the five senses, the participants individually completed a series of cards, which gave them the opportunity to discover their opinions without outside interference. In card 1, they recorded elements rooted in the identity and well-being of the neighborhoods, in addition to recognizing the existence of discomforts and anomalies. This was addressed in the worksheets developed in Activity 2. Discomfort and anomalies through the senses.

Activity 3. Neighborhood heritage through local perception. The participants were subdivided and, through participatory consensus, decided which local resources were likely to be made visible and protected as part of the roots of the neighborhood.

Activity 4. Spatial units. Within the neighborhoods, there are areas where there is interaction between the residents of the neighborhood, places with invisible borders, but delimited in the local imaginary, either by the activities that occur there, by the social interactions or by the urban environment. We can refer to this singularity that occurs in the neighborhood as spatial units [54]. For the identification of these spatial units within the neighborhood, it is important to maintain citizen participation because through collective memory, rather than through the policies of local authorities or the knowledge of groups from academia, it is the residents themselves who identify the existence of these areas within the neighborhood.

Finally, the data were analyzed and explained through a series of infographics presented at a return workshop. The director of the Senior Center was present, as well as the participating population and representatives of the SOLAR DECATHLON team from the US.

3.2. Contribution of Technical Agents from Academia and Official Institutions

Due to their period of construction, the residential polygons are an example of the urban singularity developed in Seville during the modern movement. The ETSAS, as a knowledge-generating space, has been working for almost a decade in research, teaching, and projects in this neighborhood, so it has been able to develop an exhaustive analysis of the San Pablo neighborhood from an interdisciplinary perspective.

The research developed from academia (ETSAS) on the San Pablo neighborhood is related to the analysis of public space, the layout of the equipment within the neighborhood, as well as the housing typologies and their construction characteristics [20,34,55]. Currently, the issues of comfort, habitat healthiness, and energy poverty in San Pablo are being addressed [7,31]. However, there is still an unexplored field in the San Pablo neighborhood: the recognition of cultural values from a contemporary perspective. That is why this research incorporates an analysis of the San Pablo neighborhood, characterizing its tangible and intangible attributes as part of the neighborhood's social identity.

In the case of Seville, institutions such as Docomomo Ibérico, the Cultural Heritage Institute of Spain and the Ministry of Culture and Historical Heritage provide an approximation of what official institutions consider necessary to incorporate as emerging heritage [56–58]. These national and international organizations establish criteria to determine what can be recognized as emerging heritage, beyond being included within the heritage associated with the Modern Movement [20,34,55,59–61]. Knowing and contrasting them is decisive, since it is these organizations that have the power to create protection plans and strategies to safeguard the cultural values of a unique neighborhood such as San Pablo [62,63]. Currently, as part of the Modern Movement, existing churches have been recognized about San Pablo; their historical link with local society was the first value considered for their protection as local and emerging heritage. Subsequently, their protection was managed before the official institutions.

4. Case Study

At the urban planning level, the Polygon San Pablo in Seville marked a change of scale in the residential developments envisaged in the 1963 General Plan, since the origin and design of the project had begun a decade earlier [64,65]. In 1953, Gómez Estern insisted that architecture should be built on an urban scale that integrated the social and intimate [66]. In 1960, the Obra Sindical del Hogar in collaboration with the Instituto Nacional de la Vivienda and the Gerencia de Urbanismo de Sevilla began the construction of an urban fabric, which would cover the lack of habitability in Seville [1]. The development of the San Pablo neighborhood, which was to be called the "Gran Barrio", which would be located on the road to the airport and Madrid [67]. It would consist of 11,500 dwellings, which would be grouped into five neighborhood units. Each neighborhood unit would be made up of 2000 dwellings and, in turn, would be subdivided into neighborhood units of 300 dwellings [3,4].

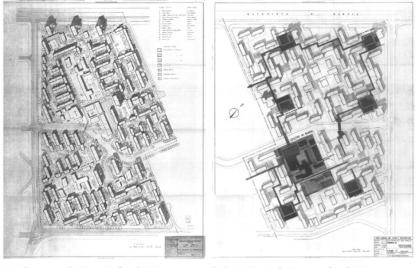
The construction of the estate was carried out in three annual phases. Initially, neighborhoods A and B were built, consisting of 2006 and 2000 dwellings, respectively. Each neighborhood unit would have a small commercial nucleus, common space, green areas, and children's areas between blocks, encouraging socialization. Both neighborhoods would be connected by a pedestrian network, which would connect to school zones and the neighborhood center; religious, social, and commercial spaces were the core of the neighborhood [3,4,68].

During the first stage, 4006 houses were built, divided into four categories: 250 were first class; 500 were second class; 650 were third class; and 2600 were social housing (Figures 2 and 3) [3,4]. The dwellings were mostly distributed in open blocks of five floors, housing ten dwellings without an elevator/lift. Blocks of nine and thirteen floors were built, although to a lesser extent. These corresponded to the first, second and third categories and were located on the boundaries of the main roads. These homes had a larger usable area and better construction quality, as well as better accessibility, as they were equipped with lifts [69]. Neighborhood groups that had previously been consolidated in other parts of the city moved to these neighborhoods [20,66].

Although San Pablo-Santa Justa is the fourth district with the smallest surface area in the city of Seville, it is one of the most densely populated, with 10,806.75 inhabitants/km² [70]. The population density is double the average for the city of Seville. Currently, the San Pablo neighborhood has a high degree of population aging [71]. Specifically, 22.7% of the population of the San Pablo-Santa Justa district is older than 64 years [69]. This high rate of aging is higher than the average in Seville, which is 18.5% of the population.

This situation translates into a dependent citizenry who have specific housing needs to develop their lives in quality conditions. However, they live in outdated buildings from a typological point of view, since the housing is not adapted to the needs of the population. For example, most apartment blocks have poor access to homes (with steps), and 77% of the buildings in the San Pablo neighborhoods lack an elevator [3,4,69].

The current Atlas of Urban Vulnerability states that the San Pablo neighborhood is located in a deteriorated, obsolete and disadvantaged urban area; this highlights the need for urban regeneration, as well as housing rehabilitation actions in the neighborhoods [64,72]. The housing fabric of the San Pablo neighborhood has become obsolete, and the quality of construction does not meet the minimum comfort needs that the dwellings require during periods of extreme temperatures in summer and winter. The internal structure of the neighborhood continues to function, and the neighborhood relations continue to give it life [1,5]. However, the older population requires interventions that allow them to have a better quality of life, mainly in terms of accessibility. Social housing blocks designed without lifts increase the difficulty of mobility for the elderly. In addition to accessing the blocks, their design forces inhabitants to use stairs to access even the ground floor. This typological and architectural obsolescence has repercussions on minimum conditions of habitability, which, in this case, is the aging population of the neighborhood that most demands urban regeneration [5,55,73].



Luis Recasens. Polígono de San Pablo, barrio A: viario y urbanización (1961)

Rafael Arévalo. Polígono de San Pablo, barrio B: estructura urbana y dotaciones (1961)

Figure 2. Urban distribution of Barrio A and Barrio B, the neighborhood of "Gran Barrio" in the San Pablo. Source: Sainz (2022), Pablo Arias y el Urbanismo de Sevilla, p. 60 [20].

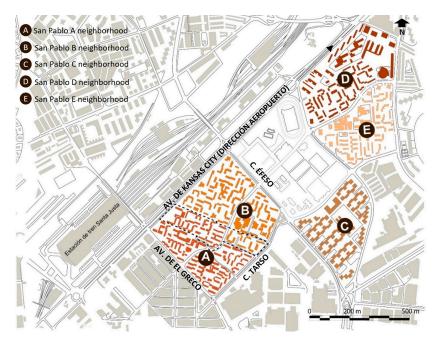


Figure 3. Location of the neighborhoods in the San Pablo neighborhood. Source: (Barrionuevo Ferrer, 2015 [73]).

Heritage Regeneration Processes in the San Pablo Neighborhood

The focus lies on the perception of the public administration. There are certain aspects to focusing on technical support from the public administration, and there are certain aspects to highlight. As shown in Table 1, institutions such as Docomomo Ibérico, the Institute of Cultural Heritage of Spain, and the Regional Ministry of Culture and Historical Heritage through the Digital Guide to the Cultural Heritage of Andalusia have recognized architectural elements in the San Pablo neighborhood, which due to their historical, architectural and cultural values have deservedly been considered for protection as part of contemporary heritage. In the San Pablo neighborhood, elements that have been considered for safeguarding and registration by these institutions include the Church of the Virgen del Pilar, the Church of San Pedro and San Pablo, and the Parish Church of San Ignacio de Loyola [60].

Table 1. Churches in the Barrio de San Pablo: considerations for their cataloging as contemporary heritage. Source: own elaboration with information from Docomomo Ibérico (DI) and Guía Digital del Patrimonio Cultural de Andalucía (GD).

St Paul's Church	San Ignacio de Loyola Parish Church	Parish of Nuestra Señora del Pilar
1961–1963	1962–1963	1962–1963
Antonio de la Peña Neila, Luis Recaséns Méndez-Queipo de Llano	Antonio de la Peña Neila, Rafael Arévalo Camacho	Rafael Arévalo Camacho
The rules of the Sindical Obra del Hogar stipulated the obligation of complementary buildings. The parish church and the outbuildings for the apostolic life and the children's nursery, DI, were erected as the center of the A district.	The church was built as a care facility, creating an open civic space that characterizes the neighborhood. This is an example of the new avenues explored by modernity, which was already in crisis, relying more on expressionism than on following strictly modern canons -DI	The parish was created as a care facility in an open space where there is also a public school and a secondary school. It configures a civic space that personalizes and characterizes the neighborhood itself, DI
In the project report, a purely functional architecture is sought, in which a sense of spirituality tries to preside in the building of great simplicity, both inside and outside, for which the most suitable materials are sought, DI	It is a courageous commitment to the geometry of volume. The ground plan gives rise to a truncated triangular prism in which the sharpest vertex rises towards the altar to finish off with a simple cross -GD	The project consists of a large volume of exposed brick that houses the presbytery and the altar area. The volumetry of the nave stands out and with it the interesting skylight that opens over the altar of the church, DI
These are very interesting examples of the search for typological renovation, based on the commitment to the nascent languages with which international architecture was beginning to qualify the characteristics of modern architecture, placing this religious architecture of the 1960s -GD	It is a project of extraordinary formal validity. The decomposition of the program allows for a volumetric rotundity that monumentalizes the building, while at the same time implying a reflection on the model that seeks to redefine itself from the guidelines of modernity, GD	In its design, the influence of the Brutalist trends that emerged in the architecture of the Modern Movement GD- is evident.

The General Urban Development Plan of Seville [59,74], together with the Digital Guide to the Cultural Heritage of Andalusia [61], according to the Docomomo Iberic database, has recognized and protected the churches that were built in the San Pablo

neighborhood due to their historical temporality. On the one hand, the churches were part of parish complexes that had to be present in every urban project, since in the historical period in which they were built, the social and cultural policy aimed at a complete education, which included the religious sphere [75]. At the municipal level, in 2005, the City Council and the Nervión-San Pablo district placed a sculpture on El Greco Street in recognition of the elderly, particularly the residents of the neighborhood, by the sculptor Guillermo Plaza Jiménez [63].

On the other hand, as stated in the methodology, it is necessary to consider the opinion of the technical studies at the University. For just under a decade, the School of Architecture (ETSA) of the University of Seville has been conducting interdisciplinary research on the analysis of neighborhoods built in the 1960s and 1970s, using San Pablo as a case study (Figure 4).



Figure 4. Tour of the Barrio de San Pablo 2021–2022. Source: graphic material, optional Energy and Sustainability in Architecture.

To understand the evolutionary process in the urban development of Seville and the architects of the interventions that were carried out in the mid-20th century, it is necessary to read the approaches put forward by Victoriano Sainz, in significant research such as 'La condición territorial de lo urbano. En torno a la trayectoria docente de Pablo Arias'' (2015), as well as in his doctoral thesis "Pablo Arias y el urbanismo de Sevilla" (2022). To solve the housing shortage that Seville had been suffering since the beginning of the twentieth century, he intervened with the construction of large residential estates; the San Pablo neighborhood is an example of the incorporation of the best urban planning solutions at a national level [20,66].

Addressing the urban and typological obsolescence that exists in residential estates built in Spain between 1950–1980 from a contemporary standpoint, as well as the heritage value of the architecture built during the Modern Movement in Seville, is a subject addressed in doctoral theses. In the case of San Pablo, its neighborhoods have urban and building obsolescence, a product of the physical deterioration of the housing and construction systems, as well as the social condition of the resident population. This is a factor that reflects a level of poverty and vulnerability [5]. In the doctoral thesis, "Patrimonio y ciudad. Barriadas residenciales en Ciudades Medias del Litoral", a comparative analysis between Andalusia, Portugal and the Netherlands (2020), the San Pablo neighborhood is approached as an example of a typology of residential neighborhoods built specifically in the 1960s in the city of Seville, with the aim of solving the housing shortages suffered by the city due to the industrialization and urban growth processes. As public housing, San Pablo has lacked historical and heritage recognition, unlike other examples in the large cities that developed at the same time as Seville, in addition to which the social aspect has not been made visible as part of the intrinsic value of the neighborhood [34,55].

5. Results

The results obtained from the participatory processes with the citizens are presented below. Given the singularity of the population that has remained in the neighborhood since its foundation, it was decided to work with residents who attend the Alfonso de Cosso Senior Citizens' Centre. Of the 7348 people who live in neighborhoods A and B, 22% are over 65 years of age, and there were 95 single-person households inhabited by people over 65 years of age (Ministry of Public Works, 2011).

Of the 25 participants, 84% were women and the remaining 16% were men, ranging in age from 62 to 85 years; of these, 21 participants have lived in the neighborhood since 1964 and 1966 and are considered among the first residents (Figure 5).



Figure 5. Participatory workshop: heritage. Alfonso de Cossio Senior Citizens' Center, May 2022.

The results obtained from each of the activities carried out are presented below. Activity 1. Identity elements and well-being in the neighborhood. The 25 participants highlighted the vegetation and gastronomy of the bars and restaurants as good elements; they also agreed on the importance of the public space, together with the co-existence with other residents in the neighborhood. These issues are listed in Table 2, where the main considerations expressed by the participants are recorded.

Table 2. Elements of Identity in the Neighborhood through the Five Sensations.

Responses from the Worksheets Applied in the Workshop				
Elements of Identity through Sight	% res.	Elements of Identity through Smell	% res.	
Public space (architecture, public furnishings, vegetation, maintenance, lighting, etc.)	66%	Public space (vegetation, good cleanliness, smell of food and stews, squares, courtyards, etc.).	93%	
Culture and co-existence (social relations, cultural and leisure activities, etc.)	31%	Culture and co-existence (smell of people, friends, relatives, etc.).	7%	
Social perception (tranquility)	4%			
Elements of identity through taste	% res.	Elements of identity through touch	% res.	
Public space (gastronomy, restaurants, bars, etc.).	88%	Public space (vegetation, maintenance, social center, furniture, etc.)	35%	
Culture and co-existence (socializing through gastronomy)	13%	Culture and co-existence (contact with family, friends, neighbors, etc.)	57%	
Identity elements through hearing	% res.	Social perception (comfortable, respectful neighborhood, etc.).	7%	
Social perception (people, pleasant sounds such as children playing, voices and laughter, quiet neighborhood)	41%			
Public space (quiet neighborhood/squares/environment, pleasant sounds of bells, birds, etc.)	59%			

Activity 2. Discomfort and anomalies through the senses.

Regarding the discomforts and anomalies identified by the participants, it is worth noting that most of them refer to the cleanliness of the neighborhood, the lack of waste management, or the lack of maintenance of vegetation and trees in San Pablo. In particular, the desire to live in a clean and healthy neighborhood stands out, as well as the importance of having available means, such as comfortable waste containers for the elderly; all these issues are listed in Table 3.

Table 3. Discomfort and anomalies through the senses.

Responses from the Worksheets Applied in the Workshop				
Discomfort through Sight	% res.	Discomfort through Hearing	% res.	
Public space (pavements not accessible, lack		Public space (noisy streets, cars, bars at		
of cleanliness, pet excrement, lack of litter	95%	inappropriate hours, cleaning machines,	61%	
bins, dirty blocks due to renovations, etc.).		builders, etc.).		
Culture and coexistence (presence of drugs,	5%	Culture and co-existence (neighbors, rudeness,	39%	
nuisance gatherings, etc.)	570	noise from pets, etc.).	5770	
Discomfort through taste	% res.	Discomfort through smell	% res.	
Public space (poor state of the public		Public space (lack of maintenance of the sewage		
environment, poor surveillance, bad smell of	67%	system, maintenance of garbage containers, pet	90%	
trash, lack of leisure areas, etc.).		waste, etc.).		
Culture and co-existence (lack of education	17%	Culture and coexistence (constant smell of food	10%	
of citizens)	17 /0	in buildings, environment, etc.).	10 /0	
Social perception (lack of gastronomic		-		
variety, few places for homemade food, too	17%			
much fast food, etc.).				

Responses from the Worksheets Applied in the Workshop			
Discomfort through Sight	% res.	% res. Discomfort through Hearing	
		Discomfort through touch	% res
		Public space (lack of cleanliness, poorly	
		maintained fences, lack of access ramps, raised	80%
		tiles, no benches to sit on, etc.)	
		Social perception (lack of safety, lack of leisure activities, etc.)	20%

Table 3. Cont.

Activity 3. Neighborhood Heritage through local perception.

Activities 3 and 4 were carried out in groups and in collaboration with the working group. The opinions were recorded on neighborhood cards and graphically on maps (Figure 6). For the analysis, the information obtained from the cards and cartography was classified into public space (facilities) and culture and coexistence, as shown in Table 4.

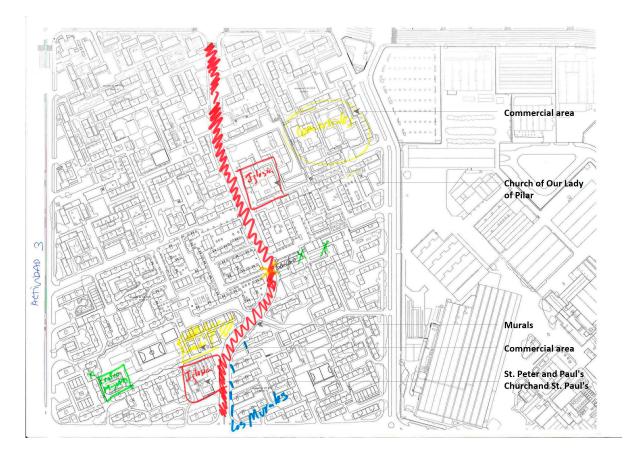


Figure 6. Social mapping: identification of heritage elements (map 1).

According to information obtained from the older population, it is important to preserve the buildings linked to the identity and origin of the first residents. At the same time, making certain urban elements that are historically and socially rooted in the collective imagination visible is also considered important. These resources are present as milestones in collective memory. Through collective memory, the residents recognize urban and cultural landmarks: reference was made to public squares and neighborhood gardens, street nomenclature, and murals alluding to flamenco and tablao. The latter are reminiscent of what originally promoted co-existence among the first residents who settled in the neighborhood. At an equal level of importance, neighbors refer to the quality of urban facilities, as these allow them to have, within the possibilities of the neighborhood,

an acceptable quality of life. The Senior Citizens' Association, the bus stop, and the health center are the mentioned resources.

Table 4. Heritage elements.

Social Mapping: Heritage Elements			
Category	Element	% resp.	
	Churches	10%	
	Murals	3%	
Culture and coexistence	Flamenco Tablao	3%	
	Senior citizens' association	10%	
	Sports center	6%	
	Ambulatory	3%	
	Lifts	3%	
	Pavements	10%	
	Main streets	10%	
	Public squares	10%	
Public space (equipment)	Vegetation	6%	
	Sewers	3%	
	Refuse containers	3%	
	Lighting	6%	
	Shops	6%	
	Busstop	6%	
	*	100%	

Activity 4. Spatial Units

The responses on the characterization of the neighborhood through the maps are shown in Table 5.

 Table 5. Identification of Space Units Within the Neighborhood.

Participatory Mapping					
Categories	Comments	Map	Categories	Comments	Map
	Problems of drug addiction	M2		Church of Jesús Cautivo	M2
	Meeting place for conflictive people	M3		Health centre	M2
	Stay of conflictive people	M3		Senior Citizens' Centre	M2
	Meeting places for young people	M2		Educational facilities	M2
	They meet for drinking, binge drinking	M2		Public facilities	M2
	Area of the neighborhood with a better social class	M2		Squares without benches or litter bins	M2
Culture and coexistence	Residential area of low social class people	M2	Public space	Accessibility problems in some blocks	M2
	More heterogeneous social profile	M2		Area where young people gather for drinking bouts	M2
	Good coexistence	M2		In the plot where for the 21st there is a botellonas (street drinking)	М3
	Quiet residential area	M2		The public space between the blocks is full of cars.	М3
	Residential area with elderly people	M2		Problems of cleanliness	M2
	Residential with children	M2		Educational facilities	M2
	Older people and children living together	M2		Parish of San Pablo	M2

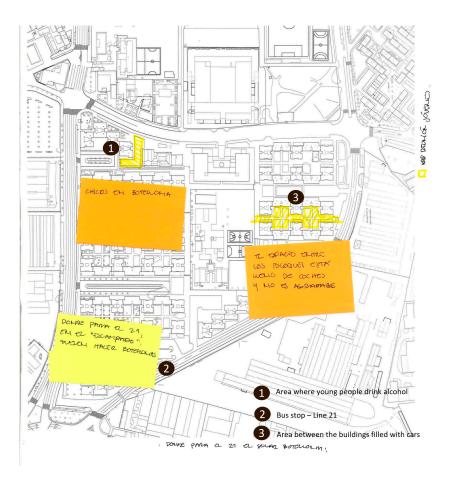
The participants established the existence of zones within the neighborhood, constructed based on social, imaginary and preconceived ideas, which revolve around the uniqueness of the residents and the urban environment.

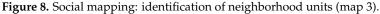
In Figure 7, four spatial units reflected in map 2 were identified. In zone 1, reference was made to the fact that visually the situation of the housing blocks shows that neighbors with a better social situation reside there. The center of the neighborhood is considered of vital importance; it is made up of the church of San Pablo and shops. In Zone 2, the participants report that this part of the neighborhood corresponds to a more heterogeneous social profile; next to the center for older adults, it is perceived that there is a co-existence between children and older adults, particularly grandchildren and grandparents.



Figure 7. Social mapping: identification of neighborhood units (map 2).

Zone 3 stands out as a quiet area in the neighborhood, as there is good coexistence between neighbors. While in unit 4, the consensus is that this is the housing area with the lowest social conditions, in addition to the fact that in this part of the neighborhood there are problems with alcoholism and drug addiction. In Figure 8, the participants identified three zones within the neighborhood that stand out for the existence of social problems in their surroundings. This characterization corresponds to neighborhoods C and D. Unit 1 corresponds to an area between blocks of flats, where young people meet to drink alcohol. This situation is repeated in Unit 2, where the neighbors indicate that there is a wasteland, coinciding with the public transport stop. In this part of the neighborhood, young people also meet to drink and take drugs, making residents feel insecure.





The results obtained in each activity of the participatory workshop were grouped into the already standardized categories: culture and co-existence, urban equipment, and public space. This is to facilitate the comparison of the results with respect to the criteria valued by the institutions responsible for safeguarding the heritage.

In Table 6 we can see that the results of activities 1–4 are similar: participants value material resources linked to public space and equipment, and value the intangible through culture and co-existence, in addition to social perception.

Activity 1 and 2	Activity 3	Activity 4	Category
Public space	Public space and services	Public space	Public space
Equipment	Equipment	Equipment	Equipment
Coexistence	Culture	Culture and coexistence	Culture and coexistence
Social perception	-	Social interaction	Social perception

Table 6. Classification of Results.

As part of the neighborhood's facilities, the participating population values the health center, as well as the Senior Center and the squares inside the neighborhood; in addition, spaces such as schools and the Sports Center, for the enjoyment of the youngest people. Regarding the intangible values associated with culture and co-existence, the San Pablo neighborhood is characterized by a strong sense of family, creating a strong sense of belonging and community. Relationships between neighbors, friends and family are considered of great value.

Churches, due to their architectural typology and being the central axis of the neighborhood nuclei, have been recognized as part of the Modern Heritage of Seville (by the Digital Guide of the Cultural Heritage of Andalusia, together with Docomomo Ibérico). For this designation, the social value was the main criterion for their protection since they are part of the feeling of belonging among the population. Flamenco is manifested as an intangible value; the participating population recognizes these roots of Andalusian popular culture as their own. In addition, flamenco is present on the streets and squares of the neighborhood, and the name of each space corresponds to a concept associated with the musical culture of flamenco.

Regarding the deficiencies in the neighborhood, citizens, being older people, emphasize the importance of mobility. They allude to how complicated it is to access apartment blocks, in addition to the lack of elevators in most of the buildings. Due to the current physical state, the participating community considers the protection of public spaces vital, as they are essential service areas for elderly residents of the neighborhood to maintain an acceptable quality of life.

Finally, it should be noted that the application of the methodology and the participatory technique has made it possible to identify the actors involved in the urban regeneration of obsolete neighborhoods.

In the case of the San Pablo neighborhood, when the criteria defined by the institutions in charge of managing and establishing what can be valued are contrasted with the information provided by the participating population, the criteria coincide and at the same time differ in the most humanistic issues (Table 7).

Level	Source of Information	Category of Results Obtained	
Administrative level	Iberian Docomomo Directorate General of Historical and Documentary Heritage of Andalusia Andalusian Catalogue of Modern Architecture.	Architecture Urbanism Society	
Academic level from the University	Research Doctoral theses.	Architecture Urbanism Energy	
Participatory level with citizens	Participatory workshop in the neighborhood	Architecture Public space Society Culture and coexistence	

Table 7. Agents and criteria for heritage safeguarding.

There is a coincidence in the opportunity to make public spaces, facilities, and services visible and protected, as well as the urban landscape. In addition to these values, the population considers it fundamental to recognize those intangible elements that are rooted in the identity of the neighborhood, where social manifestations are rooted in co-existence and local customs.

6. Discussion

Numerous studies have highlighted the need to include citizen participation processes in the definition of urban transformation strategies. In the case of urban heritage protection, it is considered necessary to develop participatory methodologies that allow the inclusion of citizen perception, in addition to the opinion of the public administration or technicians.

This research has based its participatory methodology on previous experience developed in the city of Cuenca, Ecuador (Rey Pérez and Tenze, 2018). One of the first points to highlight is the need to adapt participatory methodologies to local contexts, analyzing the target population, its sociocultural characteristics, as well as the neighborhood in question. It is considered particularly relevant to adapt these tools for obsolete or vulnerable neighborhoods, which present very different realities and needs. The results obtained from the participatory spaces created are compared with the perception of the public administration and university studies, to highlight those aspects that can only be derived from the perception of citizens.

From the academic point of view, various research projects undertaken by ETSA have studied significant issues related to the history and managers of Seville's urban development, particularly the decisive role played by Pablo Arias. Despite the political situation in the country, Pablo Arias was able to apply the best urban proposals in force at the time to the San Pablo neighborhood. The typology of the housing fabric of San Pablo is another subject that has been addressed by the University, in this case emphasizing the obsolescence of the building and the consequences for current residents. The San Pablo building stock was built before the first Spanish regulation that incorporated minimum energy efficiency criteria, the basic building standard NBE-CT-79. As a result, construction systems that allow the population to enjoy adequate comfort and habitability conditions are scarce, making those who live in these blocks of flats vulnerable.

Administration and academia highlight heritage related to architecture, urban planning, energy, and society. However, these sources of information do not refer to other vital aspects that can only be gathered through citizen consultation and participation. As local actors, residents who have identified urban, social, and ephemeral elements in the habitat environment that are of significant value to them and have not been recognized in any previous study. Experiences and collective memory form part of a knowledge matrix, which has contributed to the debate on what is valuable to citizens, giving a hierarchy to equipment, the urban environment, and social relations.

Finally, this research reveals the importance of integrating different voices as part of citizenship. With the development of this research, it is shown that their experience and knowledge reflect that institutional technicians and academia must consider social and cultural values when considering any type of urban regeneration.

Their experience and knowledge of the neighborhood is a contribution that can make a local urban regeneration plan or strategy sustainable. In the case of San Pablo, multistakeholder participation between institutions, technicians, and academia has allowed a transfer of knowledge orientated to the local population, mainly in terms of architecture and modern heritage, recognizing that the scale of the valued resources is usually smaller but loaded with greater symbolism in the identity of the community. The challenge lies in finding these governance spaces for urban and heritage regeneration, in an inclusive manner, without forgetting that, for this to be sustainable over time, it must start from the bottom up.

7. Conclusions

The development of this research shows the importance of creating collaborative networks between the different agents involved in decision-making—in this case, the cohesion of agents from local society, academia, and official institutions. Integrating their voices, knowledge and experiences in urban regeneration actions can lead to sustainable solutions in neighborhoods with a high degree of obsolescence. To change a research model, it is necessary to bring together interdisciplinary theories and methodologies that allow the different voices of the agents involved in urban regeneration processes in obsolete neighborhoods to be related. In the case of the San Pablo Polygon, actor–network theory made it possible to establish similarities, differences, and contrasts between the criteria defined by the main agents linked to the safeguarding and protection of the emerging heritage and the results derived from the participatory workshops. At the same time, it is recognized that the academy as technical agents (interdisciplinary Solar Decathlon Team of the US) within this network have a mediating role between the voices of the local society and the criteria of the official institutions. To this is added the debate on the need to identify,

recognize and safeguard the architectural typology of the neighborhoods linked to the Modern Movement.

Through the participatory-multi-actor methodology, the structure of the participatory workshop was developed from the bottom up. This allowed the incorporation of different voices from the local level. This contribution is uncommon in urban regeneration processes, as these are interventions assigned by official institutions, and their design is closely linked to the criteria that define what is recognized as heritage. Residents, in their role as local agents, represent an added value when considering urban regeneration processes. Although the knowledge of the local population does not revolve around official regulations and guidelines, it is their experience and their experiences in the neighborhood that allow them to recognize in their environment a series of resources rooted in the neighborhood's identity.

Incorporating citizen participation, and in particular the elderly population, in the development of workshops has resulted in obtaining information that would not have been possible to identify if the analysis in the San Pablo neighborhood had been based solely on the criteria established by official institutions. The elderly population, due to the importance of their quality of life, have given visibility to the existence of a series of architectural resources within the neighborhood, which should receive maintenance, but should not modify their form or their social function. In the first place, they established spaces such as the Health Center and the Alfonso de Cossio Senior Center. The existence of a central core in the different neighborhoods of the polygon generates a sense of security for them since they are not forced to leave the neighborhood. In the central nuclei, public squares, commercial areas, and the respective church, in addition to schools or sports centers, are cohesive. At the same time, the older population, being the longest-lived residents in the neighborhood, makes visible and values intangible resources, which are rooted in the collective memory and identity of the neighborhood. They recognized as an intangible value the deep rootedness of Andalusian popular culture, where flamenco is present in collective consciousness, as well as in sociocultural manifestations, and in the toponymy of squares and streets of the neighborhood.

As main limitations, it is worth highlighting the bias that exists in the participating population. Although the population of San Pablo has a high rate of aging, the fact that the workshops were held at an Elderly People's Center has led to a bias in citizenship and, therefore, in the imaginary constructs about the values of the neighborhood. Another of the limitations of this research is the ability to adapt the methodology used to local contexts. As discussed in the methodology section, the method developed in Cuenca, Ecuador [44] has been replicated. To replicate the process, it has been necessary to adapt it, both to the San Pablo context and to the target population. Researchers wishing to use this methodology should therefore be able to adopt the method to their own realities.

Finally, the participatory research process contributes to the recording of less positive data and information. Architectural obsolescence is the most frequently repeated attribute, as the construction typology of housing construction does not meet the basic needs of comfort and health required by the elderly population, resulting in energy-poor housing. The problem is accentuated in mobility issues, in how complex it is to access housing blocks, in addition to the fact that the lack of elevators hinders their mobility, a situation that makes them more vulnerable and dependent. This research concludes the following. To apply interdisciplinary regeneration in neighborhoods characterized by urban obsolescence, it is necessary that agents at three levels intervene: society, academia, and official institutions. The exchange of criteria, knowledge, and experiences among the agents involved leads to a sustainable regeneration over time.

Through these results, it is hoped to be able to contribute to local government strategies to protect the heritage of neighborhoods as well as to improve their living conditions.

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