Urban Memory and Street Design: A Comparative Analysis of Traditional and Contemporary Street Patterns in Nablus City

Mohammed Itma[1] , Zahraa Zawawi[2]* , Carmen Hidalgo-Giralt[3]*

[1] Architectural Engineering Department, An Najah National University, P.O. Box 7, Nablus, Palestine
[2] Urban Planning Engineering Department, An Najah National University, P.O. Box 7, Nablus, Palestine
[3] Geography Department, Universidad Autónoma de Madrid, 28049 Madrid, Spain

* Correspondence: Zahraa Zawawi (zahraa.zawawi@najah.edu); Carmen Hidalgo-Giralt (carmen.hidalgog@uam.es)

Citation: M. Itma, Z. Zawawi, and C. Hidalgo-Giralt, "Urban memory and street design: A comparative analysis of traditional and contemporary street patterns in Nablus city," *J. Urban Dev. Manag.*, vol. 3, no. 2, pp. 83–94, 2024. https://doi.org/10.56578/judm030201.

Abstract: This study examines the influence of Arab-Islamic cultural memory on the spatial planning and design of streets within Palestinian refugee camps, with a particular focus on Nablus City. The research aims to ascertain how cultural elements, emblematic of collective memories among the camp residents, are incorporated into the urban redevelopment of these areas. A historical analysis of street design methodologies forms the basis of this inquiry, facilitating a comparative understanding of contemporary and traditional street layouts. Two case studies were selected to perform architectural surveys and field observations, illuminating commonalities between traditional and modern street designs. It was observed that the street configurations within the refugee camps not only mirror the collective memory of the Palestinian populace but also align harmoniously with the historic urban fabric of Nablus City. Contemporary street designs in these camps exhibit a plethora of architectural, visual, and cultural parallels with their traditional counterparts. These similarities include an organically developed street network, characterized by spontaneous growth and a privacy-oriented hierarchy of street types. Additionally, the serpentine nature of these streets, bending to adapt to the environment, further underscores their organic character. Privacy is a key design consideration, evident in features such as elevated windows, shaded balconies, and minimal openings in narrow passageways. The principal conclusion drawn from this study is the pivotal role historic urban models should play in guiding the development of refugee camps, particularly in the formation of street networks and patterns. It is posited that, with appropriate visual enhancements, the existing structure of many streets within these camps is well-suited to meet both social and aesthetic needs. In terms of expansion, an in-depth exploration of the socio-cultural implications of street design on community interaction and identity in these refugee camps could enrich the study. Investigating how residents perceive and interact with these spaces, and how these interactions shape community bonds and cultural identity, would provide a holistic understanding of the impact of urban design on refugee communities. Additionally, analyzing the role of contemporary urban planning policies in facilitating or hindering the preservation of cultural memory within these settings would be valuable. This could involve examining policy frameworks and their effectiveness in integrating traditional urban elements into modern planning practices.

Keywords: Urban cultural heritage; Street design evolution; Refugee camp urbanism; Nablus city planning; Collective memory in architecture

1 Introduction

Refugee camps are a type of settlement that resulted from the emigration of Palestinians because they were forced to leave their cities and villages after the 1948 war, which is called "Nakba". Camps were usually characterized by temporary tents around a net of streets constructed on a limited area of land that developed to be built after that by permanent structures grown spontaneously around the street network. This type had been established and began to grow outside city centers to house the Palestinian refugees. However, those refugee camps soon doubled in density, and the original urban form and street patterns changed rapidly due to the rapid growth in a limited area [1]. The current manifestation of these camps is still dense structures around street networks that have been growing fast during the last decades. Although these camps have undergone major transformations in their fabric over the past

century due to political events, wars, and migrations [2], This event led to the refugee camps being a new type of human settlement—not rural and not urban [3]. As a result, many institutions emphasize the need for a regeneration plan for these streets to provide an adequate urban environment for the residents. However, it is important before any regeneration project to understand the background of this street network and its relationship with the cultural aspects of the area to propose an adequate conceptual framework for urban regeneration, which becomes the concern of this study.

Many scholars have discussed the physical environment of the Palestinian refugee camps inside and outside Palestine. Rueff and Viaro discussed the housing policies practiced in the Palestinian camps, which were described as a temporary situation, but they are not appropriate because the situation has continued over the past decades. The inadequate environment becomes a burden on the health and community development in those camps, which has been witnessed by several successive generations as pending radical political solutions that have not happened so far. The study concludes that overcrowding and the poor condition of the buildings are the most important inhumane factors that the residents of these camps face [4]. Alnosour and Meaton discussed housing conditions in the Palestinian refugee camps of Jordan. The study concludes that the urban environment in the camp is underdeveloped, with many political and practical challenges that stand against housing development [4]. Other studies dealt with the issue of solving camp problems by improving living conditions and merging these areas with the city. Most of these studies do not take a detailed approach to integration with the modern part of the city, which consists of wide streets and modern-designed blocks. Hence, this approach may introduce radical changes in the camp's urban form and street pattern to merge them with the modern parts [5–7].

Another scholar discussed the cultural and emotional environment related to refugee camps' character; this paper highlighted the imposed forms of cement found in the camps on the Palestinian architecture. The topic of the ethnography of cement was discussed as a visual component in the built environment and the extent to which the use of raw cement materials affects the general impression of the behavioral experience in the streets of Palestinian camps. Moreover, the paper argues that the cement view plays a role in daily oppression because it reminds pedestrians of the existence of the camp [8]. Taslak, in her book These Physical and Characteristics of Palestinian Refugee Camps, discusses the renovation of the physical characteristics of the Jenin camp, referring to its historical development and its roots in the Palestinian vernacular architecture [9]. Misselwitz describes the essential planning of the refugee camps as destructive and not belonging to the Palestinian culture. He describes the negative aspects of the architectural spaces for the residents, which have fewer interventions by planners and architects [10]. As a result, the current planning of camps is characterized by complexity in terms of urban mass and urban space [11].

From this standpoint, this study argues that any development in the physical environment of the Palestinian camps in the future should be guided by an in-depth understanding of the role of collective cultural memory in shaping those urban environments. We believe that a reference for this development should be critically chosen to estimate relevant interventions in these camps. Thus, this study gains importance because it is the only one that investigates the possibility of traditional settlements in Palestine being this reference by examining the common influence of collective cultural memory on the urban environment in both traditional and contemporary camp settlements, with a special focus on street forms.

The term cultural memory appeared for the first time in literature by Maurice Halbwachs in his book *The Social Frameworks of Memory*. Halbwachs' understanding of cultural memory is based on the distinction between individual and collective memory. He described individual memory as "personal" and "autobiographical" of the individual. While the collective memory is "social" and "historical" [12, 13], These values and customs together constitute a collective memory of society and are relative, unstable, and changeable. Such values are also multiple and often not measurable or conflicting. However, these values are stored in individual memory and spread among individuals according to the strength of their influence. The strength of these values is inherited through generations to form a part of the collective memory of society. Then, the nature of collective memory has great implications for shaping the built environment. Cultural memory is the process of remembering events about things and places that people encounter in a social setting. Collective memory is viewed as a repository of culture, and this view sometimes leads to the use of the term cultural memory [14]. Pierre Nora studied spatial collective memory; she was particularly interested in the geographical and urban environment. Nora discussed how certain places can capture different feelings and embody national memories [15]. Aldo Rossi established the concept of "urban memory" in his book *The Architecture of the City*. Rossi allowed the concept of collective memory to be introduced into architecture and urban design. In this book, Aldo Rossi argues that preserving heritage sites is tantamount to preserving people's cultural memories and protecting their national identities [16]. Christine Boyer adds to this discussion in her book *The City of Collective Memory* that the city's architecture expresses cultural memory and bears traces of previous architectural forms, along with the planning and monuments of the city. Christine explains that although the names of cities may not change, their physical elements are always subject to change, be forgotten and modified to suit new requirements, or may even disappear in the pursuit of different purposes [17].

It is argued that the built environment is not only made up of structures around streets; it consists of layers

of tangible and intangible features, such as cultural collective memories of the city's inhabitants [18]. Cultural memories represented by these structures and streets can influence the formation of place identities and the quality of social life. Such memories are vital for the health and well-being of community belonging, stable identity, perception of place, and social participation [19]. Thus, the built environment is the embodiment of the memory of societies, and the accumulation of images, events, and people constitutes the collective memory [20]. The architectural heritage tells stories that preserve the memory of man and place through time; even our contemporary built environment can be a heritage for the next generation [21]. The built environment, which is destined to survive, is a record of the culture of its time and a witness to successive social, political, and economic transformations [22]. And the city, with its architectural and urban richness, is like a painting of masterful perfection. Each piece in that painting has something unique about it. Although each piece may be unique, together they paint the full picture of the city [23].

Hence, the streets are an important part of the built environment because culture represents an extension of history that helps in understanding life in a historical sequence. The vision of streets must extend to the simple path for transferring through, and within this content, it should be considered a pivotal nerve of the city as it contains a spiritual, cultural, and social value that cannot be replaced or retrieved [24]. Every group of buildings around the street expresses a historical generation that differs from the others as a source of inspiration, knowledge, or interpretation [25]. Societies may produce an environment characterized by aesthetic and historical value as a result of the prosperous times they went through. Societies can also produce the opposite environment in difficult times [26]. However, revealing what causes the manifestations of the street environment needs to link the architectural reality with the historical aspects that the community has gone through. Thus, the emotion in the street environment is a true expression of the events the community has gone through, which will influence users of the streets [27]. There is a change in the physical output that can be produced by a society in terms of visual and aesthetic aspects. However, the protection of socio-cultural values, customs, and habits will inevitably appear in the formation of the street environment in all cases [28, 29].

This study argues that the spontaneous growth of the camp streets is a result of the collective memory of the Palestinians and has many cultural values worth conserving, similar to the conservation of traditional areas. It is a try to understand the cultural background to introduce a conceptual framework for upgrading these streets in the future. From this standpoint, this study tries to understand the influence of cultural memory in shaping the contemporary refugee camps in Palestine, with special reference to street patterns. Although these areas are considered slums because of their over-densification and under-developing aspects like deterioration of buildings and infrastructure, this study is still able to shed light on cultural aspects in the built environment of these areas.

2 Methodology

This study uses the analytical method to understand street character and the comparative method to find similarities between contemporary and traditional streets. The comparison will be conducted between Nablus's historic city and Balata Refugee Camp in in subgraph (a) of Figure 1. The use of multiple methods in collecting information on the two cases is more appropriate for accurate results [30].

Nablus Historic City consists of six main neighborhoods, as shown in in subgraph (b) of Figure 1. These six neighborhoods are the basic components of the historic city. Each neighborhood consists of residences, palaces, and commercial and craft establishments. It also consists of several spatial elements, including streets, residential courtyards, impermeable squares and cul-de-sacs, and urban spaces. We selected the Al-Habala neighborhood as a case from Nablus historic city to be compared to one of the neighborhoods in Balata Refugee Camp. Balata Refugee Camp is the biggest refugee camp in the West Bank, with an area of 460 dunum (1000 mm^2) located to the east of Nablus historic city and consists of 13 neighborhoods. One of them is the Alhashashen neighborhood (see the subgraph (c) of Figure 1. The selection of these cases is based on two main reasons: the first is the date of construction of both cases, which is relative to the position of each; Al-Habala was the latest planned neighborhood in the peasant Nablus [31], and Al-Hashashen was recently defined as a neighborhood based on family name and social relations in the largest refugee camp in the West Bank [32]. This fact assists in obtaining relatively accurate results as both neighborhoods were developed over the previous experiences of their social and physical surroundings. The second reason is the location and urban setting, which are almost the same in the two cases referring to their surroundings, with similar relations to housing and main streets. Both are situated on the boundary of their surrounding settlements (the historic city and the camp).
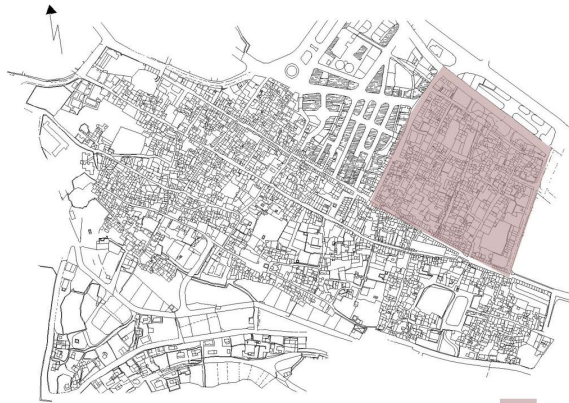
Qualitative methods were used in this research based on the analysis of the urban form and the physical structure of the streets. Methods include collecting information about the streets in the two mentioned cases using drawings, photographs, and writing notes during the field visits. Such tools helped estimate different cultural and architectural elements of streets to make the comparison. Then the study adopted a morphological classification in surveying both cases, including street width, street type, and street relationship with its surrounding environment: structures, urban spaces, and other streets. The classification gets the benefit of the authors' estimations for distances, and some measurements were taken from the maps.
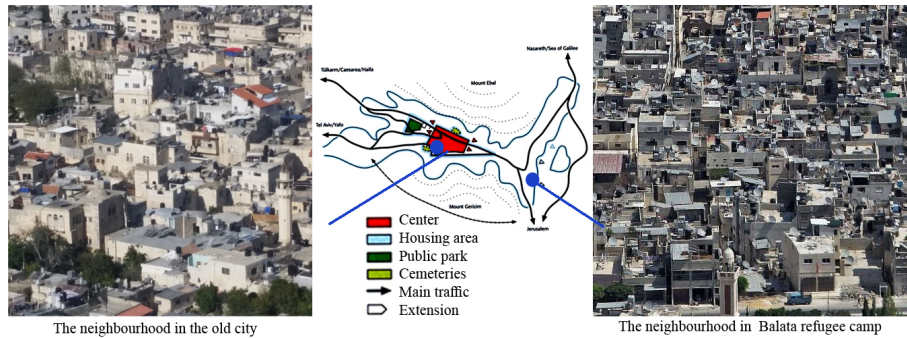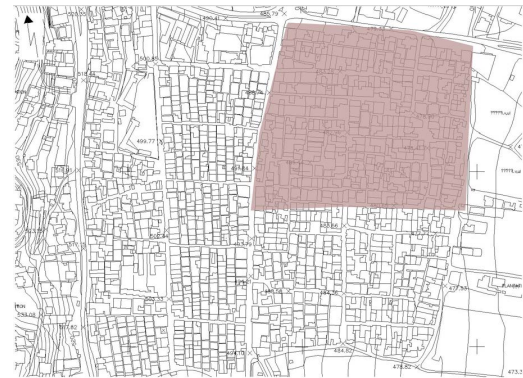
Figure 1. The selected neighbourhood in the old city of Nablus and the Balata refugee camp [32, 33]: (a) Location of the selected study area; (b) Map of Nablus city and the selected study area; (c) Map of Balata refugee camp and the selected study area

Such information is vital to form a comprehensive idea about cultural influences on street typology, patterns, and facades for all street types [34]. Understanding cultural aspects needed a special focus on the relationship of streets with housing areas, such as relations with housing openings and entrances.

For analyzing the collected data, the study tries to generate a methodological approach for analyzing street character and presenting the similarities of streets in both refugee camps and historic cities, which was extracted from the literature [34–37]. The extracted approach clarifies four levels of analysis (three physical and one cultural) that were selected from the possible influences of collective memory on street design: urban form level, street planning-typology level, architectural level, and one socio-cultural level. Such values—that will be used in the analyses—were also selected from the literature, which are privacy, territoriality, and social interaction [28, 29], [38]. Figure 2 summarizes the methodological approach used for analyzing street form in terms of collective cultural memory.
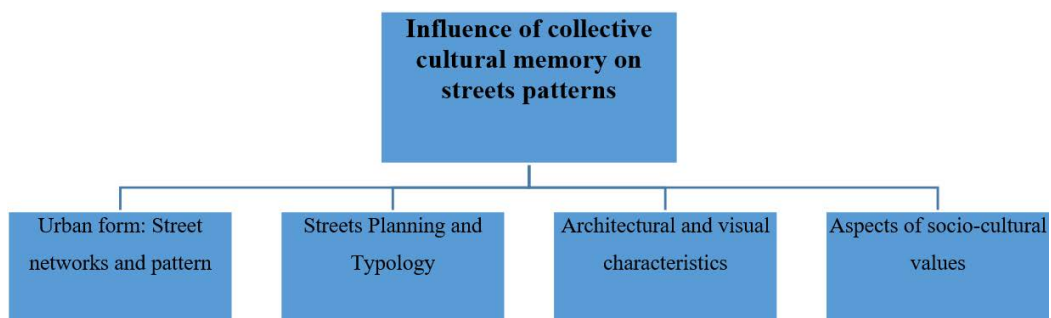

Figure 2. The methodological approach for understanding the influence of collective cultural memory on streets forms

3 Results

The methodology was developed to assess how cultural memory is preserved for Balata Refugee camp residents during the development of its built environment, and in particular the street patterns and network, by looking at the Nablus historic city urban tissue and fabric as a guide. The following clarifies the application of the methodological approach in Figure 2 in the selected case studies.

3.1 Urban Form: Street Pattern: The Transfer from the Grid System to the Organic System

The original street system in Nablus's historic city planning dates back to the ancient Roman grid system. Especially in the center and the northern parts of the city [35], as shown in the subgraph (a) of Figure 3. This grid system is very evident in the northern neighborhood of the Historic City, the Al-Habala neighborhood, as shown in the subgraph (b) of Figure 3. The change of the grid system in the city to organic growth in general can be attributed to several factors, including the great decline in the southern part of the city of Nablus to not following the grid system to make the streets more suitable for the inclined area. Moreover, the results of wars and earthquakes were an urgent reason for the rebuilding and reconstruction of these areas, as new streets were opened and new buildings were built. These changes led to many changes in the original grid system [36, 37]. However, the cultural and social changes that took place throughout the city's history were the main factors in changing the grid system. The Islamic religion is one of the biggest changes that imposed on the city an organic growth of the street network and the construction of new streets. Such changes required changing some buildings and rehiring them so that the city could adapt to the requirements of the new religion, similar to other Islamic cities.

The same transformation took place in the streets of the Palestinian camps, but in a very short period of time. These streets were planned since the establishment of the Palestinian camps in the form of a grid network of streets and individual types of houses [39], as shown in the subgraph (c) of Figure 3. The gradual transition to the organic system was done automatically by the community and without returning to the original plans. Looking at the current plan for the streets in the camp, the effects of the network planning are still clear on the map, as shown in the subgraph (d) of Figure 3.
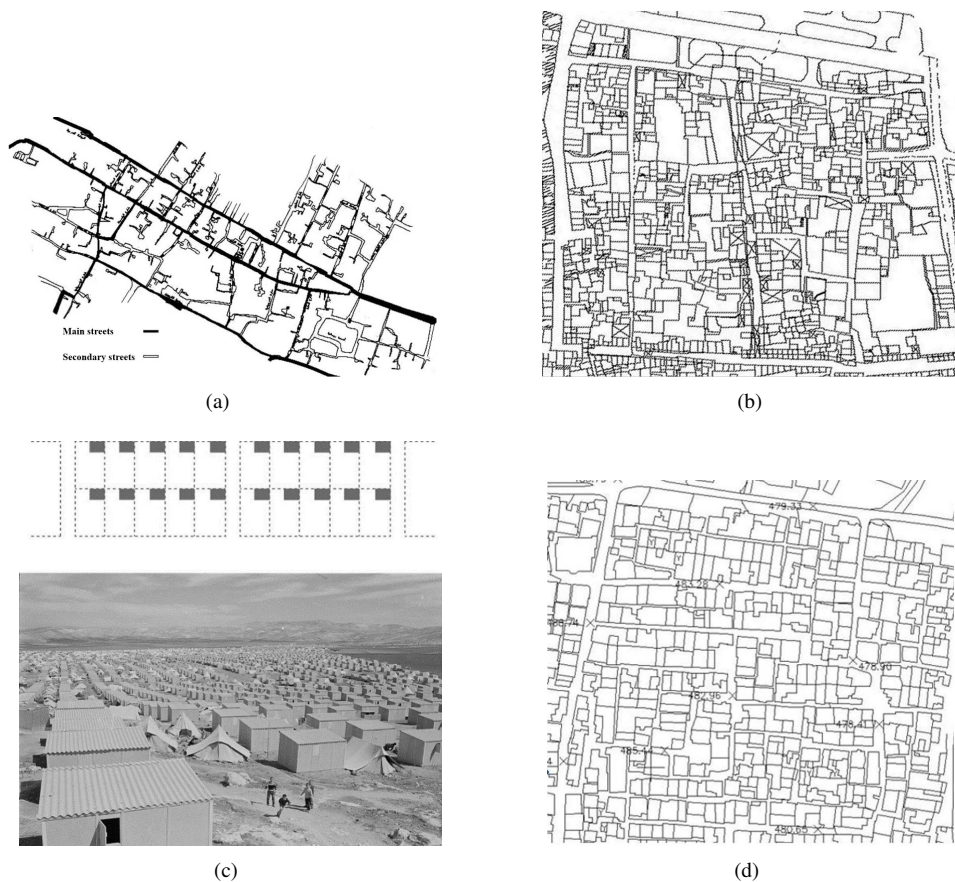

(a)

(b)

(c)

(d)

Figure 3. The influence of grid planning on traditional and contemporary streets: (a) Streets of the old city of Nablus; (b) Traditional streets in Al-Habala neighborhood; (c) Early planning of refugee camps [11]; (d) Camps streets in Al-Hashashen neighborhood

The subgraphs (a) and (b) of Figure 3 show many similarities and also differences between traditional and contemporary neighborhoods in terms of urban fabric and urban tissue (blocks, urban spaces, and courtyards). When it comes to similarities, both types of urban fabric are based on the tight patterns of low-rise dense typologies and the organic shapes that look like cells that form clusters that have no start or end. However, there are differences between the two urban fabrics, in terms of blocks: Al-Habala presents a variation of block sizes and shapes due to variations of functions, which are services and housing, whereas there is a lack of variation of block sizes in the Alhashasheen as a result of the high density of housing functions with few public functions and services. For urban space, an example of the urban spaces in Al-Habala is the courtyard; this is an important element of a traditional neighborhood with the presence of trees, which include health factors such as ventilation and lighting for homes. Courtyards were also social spaces that were suitable for social interaction and children's play. Whereas, there are no courtyards in the refugee camps. The lack of use of the courtyard in the refugee camps may be due to several reasons, the most important of which is the need for condensation due to the rapid increase in population in a limited area of land. Also, the ability to use small plots of land does not allow the existence of voids within a single piece of land, but rather there should be common or public places in which construction is prohibited, and this is not found in the original planning of the camps. In other words, the original planning did not pay enough attention to public and collective outdoor spaces. The high density is what most distinguishes the Palestinian camps, but there is still a possibility to study the general similarity between the streets in the camps and the traditional Palestinian cities.

3.2 Street Planning and Typology: Hierarchy from Public to Private

As shown in the subgraph (a) of Figure 4, the street network in traditional and contemporary settlements is a compact network that guarantees easy access to all parts while providing privacy for the residents. Therefore, there is more than one type of street. The first type is the main street, or the trunk that resembles the stem of a tree. It is central and important and teeming with various social and commercial activities, like men's meetings and commercial activities. The second type is the secondary streets, which branch off from the main street, have less width from the main street, and also have fewer public activities around them; rather, they include some collective activities like women meeting and children playing. The third type is residential streets (branches), which are intended to reach residential homes, and many of them are cul-de-sac. These branches are articulated with the secondary streets and are not directly connected with the main streets. Accordingly, the streets divide the traditional areas into three main sections based on the gradient in privacy from public to private, as shown in the subgraphs (a) and (b) of Figure 4.
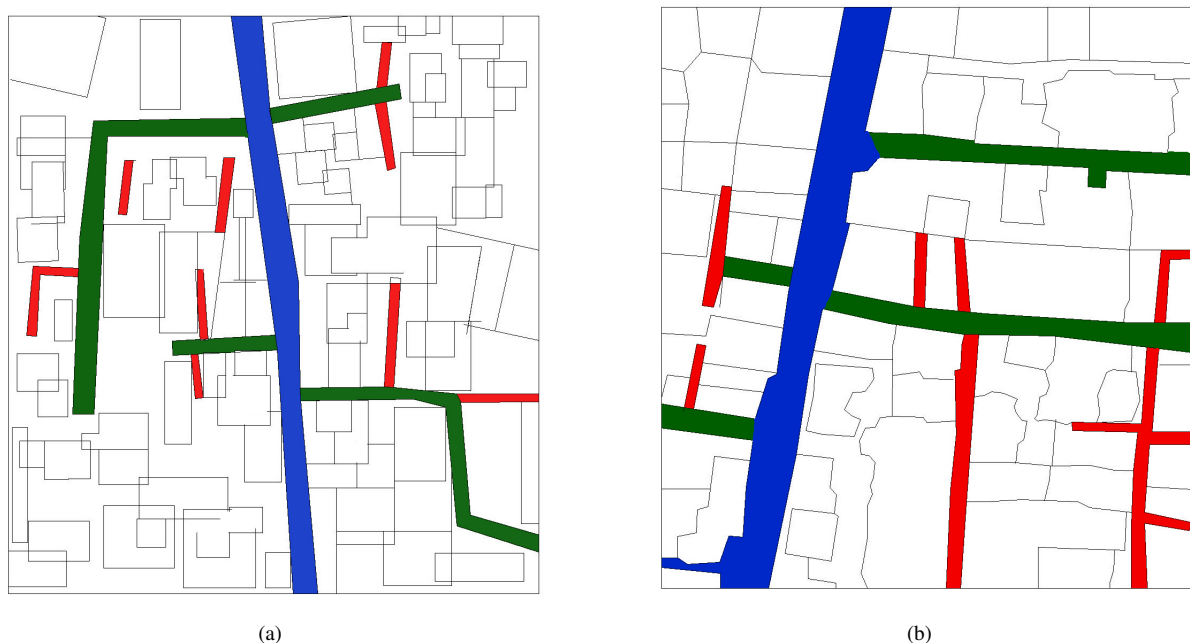

(a)   (b)

Figure 4. The transition from main streets (blue) to secondary streets (green) to branches (red): (a) Hierarchy of traditional streets; (b) Hierarchy of contemporary camps streets

3.3 Common Architectural and Visual Characteristicsv

The survey has revealed that there are many similarities between traditional and contemporary camp streets when referring to urban views. Hence, architectural components around streets also have many similar characteristics,

mainly sizable masses, harmony, and unity of elements around streets. All the subgraphs in Figure 5 shows the most common architectural and visual elements in the urban formation of traditional and contemporary streets in terms of their boundary, width, and facade forms.

Figure 5. Architectural and visual components in streets of both old city and refugee camps: (a) Continuity of street boundary; (b) Wide public streets; (c) Harmony of building heights;(d) Bending streets and changing views; (e) Flying structures above the street; (f) Narrow domestic streets

The subgraph (a) of Figure 5 shows the characteristic of continuity at the boundaries of the streets. There is a little interruption in the buildings that border the streets on both sides. To produce a high enclosure of the street with buildings, the masses are the basis of that enclosure, and the streets do not depend much on defining them on other elements such as fences and trees. On the other hand, this continuity shows a convergence in the proportions of both streets, as they often increase in height compared to the width, forming a ratio of 1 (width) to 1 (height) or less. Except in the main streets, where the street width increases significantly, as shown in the subgraph (b) of Figure 5. The proportion in this kind of street reaches 2 (width)-1 (height) sometimes or more. The subgraph (c) of Figure 5 shows the homogeneity of floor numbers around the street for both traditional and contemporary streets. The common number of floors is 1-3 floors in most cases; however, it can reach 4 floors in some buildings.

The subgraph (d) of Figure 5 show another visual aspect, which is a reflection of the spontaneous growth of the street. The bending of streets is a famous characteristic of historic cities that results in irregular shapes of land plots. This characteristic improves the visual experience of the walker through the street and makes a successive view that makes the travel more exciting, which is called serial vision. The concept was developed by Gordon Cullen. The same bending characteristic is found in the contemporary streets, with many surprising views during the walking trip. However, the difference between the refugee camp and the historic city is that the amount of visual pollution in the contemporary streets of the refugee camp disturbs the walk and decreases the enjoyment of the view. Moreover, these are mainly poor building materials, random paint on facades, and irregular pipes for sanitation and electricity. However, these aspects may also be found in the traditional streets, but in a smaller amount, which does not highly influence the charm of traditional streets in historic cities.

The subgraph (e) of Figure 5 shows that building a cantilever above the street extends the area of the upper house. Sometimes this cantilever takes the form of a flying room, which is characteristic of the traditional streets of Nablus city. The flying "upper" room is called "Qantara", and it covers the street area beneath it. It is useful in the event of stopping to take shelter from the weather factors for passersby and to take a break below them. It is also useful in increasing the built-up areas of the houses on the upper floor above a street and making a connection between street sides, which is used to enhance the coherence of the traditional fabric. In the contemporary streets, there are also some cantilevers, but they are smaller than the full room above the street. Even though Qantara does not exist in the Al-Habala neighborhood, it can be found in other areas. The reason may be the differentiation of housing ownership between street sides that makes the connection between them impossible. The difference between these cantilevers on contemporary and traditional streets is mainly the random shapes that can be produced on contemporary streets because of the need for the rapid extension of houses with little concern for aesthetic and visual aspects. The percentage of visual compatibility and aesthetic proportions decreases, but the principle of flying on the street is almost the same. Finally, the subgraph (f) of Figure 5 shows examples of narrow domestic streets or branches that led to house entrances in both traditional and contemporary streets. In these images, the effect of stone cladding is clear in achieving qualified views of the traditional streets compared to the use of cement plaster in contemporary streets.

3.4 Common Impacts of Sociocultural Values

The survey has revealed that there is a high impact of socio-cultural values in shaping the built environment in Islamic Arab cities. This was reflected by ensuring territoriality and privacy through architecture facades to the streets to ensure having few openings (windows) that are highly elevated windows from the streets; moreover, by using Mashrabiya, which is the prominent window made of wood that overlooks the street, it was used to enable women to see what's happening on the streets from their houses without being visible. This was reflected in both traditional and contemporary styles in the streets of Nablus historic city and Balata camp. All the subgraphs of Figure 6 show a comparison between the traditional streets and the contemporary streets in terms of the impact of such socio-cultural aspects on the formation of streets; privacy of houses and social interaction between neighbors can be considered the main sociocultural values that helped shape the ancient and modern built environment, as shown in the figure. Other values, like relying on power and prestige, may not be an important influential factor in shaping the streets in these cases because the social groups of the residents form a homogeneous community with limited living levels, as observed.

The subgraph (a) of Figure 6 shows the similarity in the method of raising the windows on the ground floor above eye level to protect houses' privacy. This method is found in traditional housing at a lower rate than contemporary housing, where it was important in traditional architecture to reduce the windows that open to the street. However, in traditional settlements, the presence of the middle space—courtyards—helped to do so. Since the courtyards are not present in the formation of the camps as discussed, we find a lot of openness in the houses to the streets and roads, but that did not prevent the windows from being raised to achieve a sense of privacy.

"Mashrabiya" is used heavily in the historic city of Nablus and the Al-Habala neighborhood in particular, as shown in the subgraph (b) of Figure 6; however, it cannot be found clearly in the contemporary streets, but there are attempts to surround some balconies using bricks, metal, or wood to reduce their visibility from the street. The subgraph (c) of Figure 6 shows another piece of evidence for designing privacy. the outdoor stairs directly from the street for the first floor to extract a private entrance to the first-floor house, which is a common technique used in traditional streets and is also found in contemporary streets. Common forms and shapes of traditional streets are different from the contemporary shapes, but similar concepts are found in the contemporary streets as follows: the use of cul-de-sac streets as in the subgraph (d) of Figure 6, minimum windows exposed to the narrow paths as in the subgraph (e) of Figure 6, and avoidance in front entrances as illustrated in the subgraph (f) of Figure 6.

Finally, this analysis tries to cover a common part of one refugee camp in the city of Nablus. The results of this part are likely to be the same in other refugee camps due to the common factors that formed them in the Palestinian territories, such as limited land, poverty, and fast growth. However, other differences can be found between different

refugee camps, such as the relationship with the city, the total area, and the topography of the land. These factors may have led to different forms and shapes of buildings, which are not covered by this study.

Figure 6. Impact of socio-cultural values on streets design in both old city and refugee camp: (a) Elevated windows from the street level; (b) Using traditional balconies (Meshrabia); (c) Rising the entrance of the house using stairs;(d) Narrow dead-end streets for house entrances; (e) Minimum opening to narrow pathways; (f) Avoiding in-front entrances

4 Discussion and Conclusion

The study tried to understand the influence of collective cultural memory on the design of traditional and contemporary streets in Nablus, a historic city, and Balata refugee camps in Palestine. In that sense, the methodological approach for this understanding was tested and examined in both case studies based on analyzing urban form, planning concepts, architectural characteristics, and the impacts of socio-cultural values on street design. All previous terms dealt with both the physical and emotional components of the streets. The results sustain the similarities in many aspects of both street types in all terms of analysis. Hence, refugee camps contain many architectural, visual, and cultural similarities with traditional street patterns, such as organic organization, which is the spontaneous growth of

streets, the hierarchy of types of streets based on privacy, and bending shapes that enhance the spontaneous character. These similarities sustain the influence of the collective cultural memory of designing refugee camp streets.

Accordingly, walking in the streets of Balata camp leads one to believe that the refugee areas are not simply temporary shelters to live; they transferred through the last decades into a human settlement full of emotional elements and memories, which proves the influence of the collective culture of Palestinian society as discussed in the introduction. This influence may be clearer than what other modern areas in the Palestinian cities represent. The reason can be due to the existence of regulatory laws in modern areas that maintain a kind of balance in construction, density, and health conditions for buildings.

While the issue of camps is always dealt with in other studies as informal areas or slums, However, this study revealed the impact of cultural aspects on shaping the streets of the camps. Those streets were originally designed according to the grid system, which gradually turned into an organic system that reflects Arab-Islamic culture. As for the camps that grew around the streets in a spontaneous manner without the municipality's control, they lacked organization and were thus dominated by the social character that the residents inherited in their collective memory. So, the camp can be described as a hybrid type of contemporary vernacular architecture that lacks many health and aesthetic conditions, but it honestly expresses the difficult events that the camp residents went through. It can also be concluded that the areas where there is less control over buildings and where the powers of society increase may truly reflect the residents' way of life. Such areas can show a revival of the original programming of the culture of each society that was obliterated in many modern areas. This revival can be read through the resulting built environment. Hence, architecture is still an honest expression of the culture and conditions of every society, even in modern times. We can also conclude from this study that the old towns should be the reference in the case of projects to rehabilitate the refugee camps from a social and physical point of view. Not taking the current modern regions as a reference, because these modern areas may be separated from their cultural and even climatic surroundings. Taking the traditional areas as a reference makes it easier to reach solutions that raise the standard of living for the residents in the camp in simple and easy ways.

Among these results, the main conclusion of this study is that historic cities should be the guide for developing refugee camps in general and street networks and patterns in particular in any future project. The structure of many of these streets is suitable for social and aesthetic aspects if some visual issues are improved. Furthermore, the research recommends the courtyard as an approach to strengthening the environmental and social elements. The creation of some courtyards may come at the expense of demolishing some structures that must be precisely defined to reduce the building density in the camp, which is considered one of the most important elements of urban decline in those areas.

Finally, this study aimed to find similarities between the traditional streets and the contemporary streets in the Palestinian camps to better understand the impact of the collective memory of culture on urban formation. Many other aspects related to the morphology of the camps can be studied to draw up plans to develop them in the future. The research also recommends future studies that work to reduce the impact of the high population density in the Palestinian refugee camps on various social and urban aspects. Studies could also be conducted on the challenges and restrictions of regenerating the refugee camps, as these areas are full of urban and social complexity.

References

[1] J. M. Peteet, *Landscape of Hope and Despair: Palestinian Refugee Camps*. University of Pennsylvania Press, Philadelphia, USA, 2005.

[2] E. M. Amad and A. S. Abdelhamid, "Refugee camps in occupied Palestinian territories," *Refugee Surv. Q.*, vol. XVI, no. 41, pp. 9–13, 2005.

[3] H. Rueff and A. Viaro, "Palestinian refugee camps: From shelter to habitat," *Somm. Doss. Palestina*, vol. 28, no. 2-3, pp. 339–359, 2009. https://doi.org/10.1093/rsq/hdp041

[4] J. Alnsour and J. Meaton, "Housing conditions in Palestinian refugee camps, Jordan," *Cities*, vol. 36, pp. 65–73, 2014. https://doi.org/10.1016/j.cities.2013.10.002

[5] L. Oesch, "The refugee camp as a space of multiple ambiguities and subjectivities," *Polit. Geogr.*, vol. 60, pp. 110–120, 2017. https://doi.org/10.1016/j.polgeo.2017.05.004

[6] D. Atallah, S. Kramer, L. Al Bast, B. Stanley, D. Scales, N. Jawabreh, and B. Wispelwey, "Community health work under occupation: Towards the development of a new model to address social and political determinants of health in palestinian refugee camps," *CHW Cent.*, pp. 1–11, 2019.

[7] F. M. Totah, "Palestinian refugees between the city and the camp," *Int. J. Middle East Stud.*, vol. 52, no. 4, pp. 607–621, 2020. https://doi.org/10.1017/S0020743820000768

[8] N. Abourahme, "Assembling and spilling-over: Towards an 'ethnography of cement' in a Palestinian refugee camp," *Int. J. Urban Reg. Res.*, vol. 39, no. 2, pp. 200–217, 2015. https://doi.org/10.1111/1468-2427.12155

[9] A. S. M. Taslak, "Physical and characteristics of Palestinian refugee camps: A case study of Jenin camp (west bank)," Ph.D. dissertation, Architectural Department, An-Najah N.U., Nablus, 2006.

[10] P. Misselwitz, "Refugees plan the future of Al fawwar: Piloting strategic camp improvement in Palestine refugee camps," in *Palestinian Refugees*. A. Knudsen S. Hanafi (Ed.), London, UK, 2010, pp. 95–110.

[11] S. Maqusi, "Space of refugee: Constructing a spatial dialogue inside the Palestinian refugee camp," *Grad. J. Soc. Sci.*, vol. 15, no. 1, pp. 89–118, 2019.

[12] M. Halbwachs, *The Social Frameworks of Memory*. University of Chicago Press, Chicago, USA, 1992.

[13] C. Bilsel, "Architecture and the social frameworks of memory: A postscript to Maurice Halbwachs' "collective memory"," *ICONARP Int. J. Archit. Plan.*, vol. 5, no. 1, pp. 1–9, 2017. https://doi.org/10.15320/ICONARP.2017.14

[14] A. Confino, "Collective memory and cultural history: Problems of method," *Am. Hist. Rev.*, vol. 102, no. 5, pp. 1386–1403, 1997. https://doi.org/10.1086/ahr/102.5.1386

[15] H. Nosova, "Pierre Nora's concept of contrasting memory and history," *Int. J. Philos.*, vol. 9, no. 4, pp. 216–220, 2021. https://doi.org/10.11648/j.ijp.20210904.16

[16] A. Rossi, *The Architecture of the City*. MIT Press, London, UK, 1984.

[17] M. C. Boyer, *The City of Collective Memory: Its Historical Imagery and Architectural Entertainments*. MIT Press, London, UK, 1994.

[18] M. J. Milligan, "Interactional past and potential: The social construction of place attachment," *Symbolic Interact.*, vol. 21, no. 1, pp. 1–33, 1998. https://doi.org/10.1525/si.1998.21.1.1

[19] I. Baucom, *Out of Place: Englishness, Empire, and the Locations of Identity*. Princeton University Press, New Jersey, USA, 1999.

[20] A. Rapoport, "The study of spatial quality," *J. Aesthetic Educ.*, vol. 4, no. 4, pp. 81–95, 1970. https://doi.org/10.2307/3331287

[21] D. Hayden, *The Power of Place: Urban Landscapes as Public History*. MIT Press, London, UK, 1997.

[22] A. Rapoport, *The Meaning of the Built Environment: A Nonverbal Communication Approach*. University of Arizona Press, Arizona, USA, 1990.

[23] R. Trancik, *Finding Lost Space: Theories of Urban Design*. John Wiley Sons, New York, USA, 1991.

[24] R. Redfield and M. B. Singer, "The cultural role of cities," *Econ. Dev. Cult. Change*, vol. 3, no. 1, pp. 53–73, 1954. https://doi.org/10.1086/449678

[25] F. Bandarin, "The historic urban landscape approach in action," in *Reshaping Urban Conservation*. Springer, Singapore, 2019, pp. 3–20. https://link.springer.com/chapter/10.1007/978-981-10-8887-2_1

[26] J. Akbar, *Crisis in the Built Environment: The Case of the Muslim City*. İnsan Yayınları , Istanbul, Turkey, 2021.

[27] A. Bornioli, G. Parkhurst, and P. L. Morgan, "Affective experiences of built environments and the promotion of urban walking," *Transp. Res. Part A: Policy Pract.*, vol. 123, pp. 200–215, 2019. https://doi.org/10.1016/j.tra.2018.12.006

[28] Z. Liao and G. Dai, "Inheritance and dissemination of cultural collective memory: An analysis of a traditional festival," *Sage Open*, vol. 10, no. 1, 2020. https://doi.org/10.1177/2158244020901601

[29] A. C. Varzi, "What is a city?," *Topoi*, vol. 40, no. 2, pp. 399–408, 2021. https://doi.org/10.1007/s11245-019-09647-4

[30] K. T. Wang, O. J. Thompson, B. E. Wampold, and P. P. Heppner, *Research Design in Counseling*. Cengage Learning, London, UK, 2015.

[31] N. Arafat, *A Brief History of Nablus: The Bazaar in the Islamic City: Design, Culture, and History*. The American University of Cairo press, Cairo, Egypt, 2012.

[32] "Urban planning project nablus boulevard." Nablus Municipality, 2017.

[33] S. A. M. Qzeih and R. M. Sani, "Sensory perceptual experience in Balata refugee camp," *Open House Int.*, vol. 44, no. 2, pp. 36–44, 2019. https://doi.org/10.1108/OHI-02-2019-B0005

[34] C. Moughtin, *Urban Design: Street and Square*. Routledge, London, UK, 2007.

[35] J. A. Awad, *Islamic Souqs (Bazaars) in the Urban Context: The Souq of Nablus*. Kansas State University, Kansas, USA, 1989.

[36] M. M. B. Taher and J. Correia, "Reading Nablus' urban print: Towards an understanding of its morphology," in *24th ISUF International Conference, Book of Papers*, 2018, pp. 435–442. http://ocs.editorial.upv.es/index.php/ISUF/ISUF2017/paper/view/6123

[37] M. Taher and J. Correia, "Streets in Nablus old town: Repositories for cultural identity and collective memory," in *2nd International Multidisciplinary Scientific Conference on Social Sciences and Arts*, 2015, pp. 607–614.

[38] M. Itma, "Impact of socio-cultural values on housing design in Palestine," in *Climate Change and Sustainable Heritage*, 2018, pp. 130–142.

[39] F. Abreek-Zubiedat, "The Palestinian refugee camps: The promise of 'ruin' and 'loss'," *Rethinking History*,