ABSTRACT:
This paper presents a research work on urban transformations of the old quarters in the Algerian cities of colonial origin conducted in the last ten years. These are the only existing quarters which were previously designed for Algerian population. Bel Air, as a case study of individual dwelling, is a typical example. During the colonial period (1830-1962) Bel Air, one of the oldest neighborhoods in Setif, was a quarter of resettlement for Muslims.
The transformation process in Algeria since 1990 has been very fast due to the socio-economic changes. Facing the huge housing needs, new construction became the dominant preoccupation of Algerian public authorities. Thereby, the existing heritage is left for its sake and is even daily deteriorating due to over-use, overcrowding and lack of maintenance.
The historic Bel Air is facing a serious problem of overcrowding and undergoing a fast deterioration process. In this neighborhood, social life, collective emotions and sense of community are very apparent but the commodities of modern life are missing. Residents try to find solutions by transforming their habitat, and setting better housing conditions.
Our research strategy is based on the typo-morphological analysis of the transformed plots and buildings of the colonial period combined with the study of the usage and significance of urban life for the residents. Quantitative data was gathered, a questionnaire was used, fifty respondents were interviewed and twenty house plans documented. The results show that through transformation the residents can increase house size and gain more habitable space and rooms.
In a situation of housing lack, the objective is to demonstrate the renewal importance of the built heritage preservation and draw useful guidelines for our contemporary practices.

KEY WORDS:
Urban Transformations, Urban Form, Renewal, Colonial Dwelling.
INTRODUCTION

After 1962, most of the buildings of the housing stock of the city centers and peri-central areas were built early in the twentieth century; they have now reached an advanced level of degradation. Despite the effort made by governments in the construction of new housing, much remains to be done to maintain, rehabilitate and extend the life of existing housing stock. The other problem of this resettlement neighborhood of the colonial era is that thousands of Algerians are still living in the extreme smallness.

Bel Air, founded in 1927, is one of the oldest neighborhoods in Setif. The grid plan and the plot system of this typical resettlement neighborhood, despite the obsolescence of a significant part of its buildings, continue to accept the successive urban changes preserving its original urban form. After World War I, the local authorities took in charge the spatial development of the city and made some changes in the immediate vicinity out of the walled city. An old camp called Negro village or "Zmala" on a communal land was razed to build garden houses known as a Levy neighborhood (current cité Tlidjene). It is a type of houses for the European middle classes and known as the "Habitat Bon Marché" (HBM).

This neighborhood is located in the northern part of the city, beyond the military lands. A one multipurpose room is assigned for each family, whose members are engaged in craft activity related to their traditional role of working with wool (carpets and bathrobe). At the same period other neighborhoods were built for Warriors of the First World War, the fighter's quarter in the southwest part out of the walled city and a second military quarter in the Levy neighborhood.

NATIONAL POLICY AND COLONIAL HERITAGE

The National Charter in 1976 revealed clear political intentions concerning heritage and mentioned that: "... the built heritage composed of public properties will be reorganized and benefit from urban renewal measures for its preservation." In addition, this political document denotes the Public Authorities willingness to take care of the built heritage. It also suggests the necessary involvement of citizens in this effort and shows that: "in addition to public actions, housing through its dimensions as well as its object, remains everyone's concern for its preservation and maintenance. Therefore, individual and collective actors should be associated to the national effort". However, one wonders whether the means of this daring policy will really meet the hopes.

The 1980's Patrimony policy aims to settle the continuity of the national heritage, assuming any required urban renewal and restructuring action. The colonial urbanization versus indigenous city, as a rupture caused by the colonial period, is an image to be removed. These political guidelines are in favor of functional urban areas. Future generations should be able to add their contribution of creation and continuity to the national and collective patrimony.

HISTORICAL BACKGROUND

According to André writings "real estate speculation in the town of Setif was inaugurated in 1887 by the conversion of agricultural areas into housing estates, beyond the military servitude zone (future railway station quarter), which followed the beginning of an immigration wave."

The census of 1901 show a population of 9282 inhabitants in Setif distributed as follows: 6650 in the inner city, 884 in the railway Station suburb, 347 in the industrial suburb, 812 in the gardens suburb and 876 in the Negro village, while the sparse population (rural) is 5859.

Building a resettlement neighborhood for Muslims was the first colonial experience of its kind in the town of Setif. The origin of this project can be understood only by going back to the history of the Negro village, where basic hygiene conditions did not exist.

The first idea belongs to Charles Levy, who took note of the city decision to build this neighborhood on the border of the European community. In 1922, The City Council approved the proposal made by Mr. Charles Levy, Financial Officer and Chairman of the low-cost housing (HBM) Cooperative, to exchange a piece of land located on the west of the Bejaia road, with the Negro village site to build an HBM working quarter.

The period from 1922 to 1933 saw the creation of an office called "Patrimoine Sétifien" (Setif heritage). Charles Levy, the financial delegate sponsoring this office, is a settler and a private miller, who offered his uncultivated rocky piece of land.

Bel Air is located on a large plateau overlooking the city to the north and distant of approximately one kilometer from the colonial city to better isolate it from the Europeans view. The new village, built with a regular alignment with wide streets, square and paths would contain, in addition to many houses, a traditional school and premises for indigenous industries such as carpet, burnous, etc. It would be supplied with drinking water through a fountain.

The future neighborhood of Bel Air will resettle 876 inhabitants of the village Negro, on a one family per room. In 30 years, 2000 new entrants arrived in the crowded Bel Air quarter. Remaining for a long period isolated from the city, until 1970, Bel Air is now a neighborhood in Setif with more than 2000 inhabitants.

Face to the urban sprawl and the lack of land reserves inside the urban zone, the renewal of old neighborhoods are becoming obvious to the city.

---

3 PRENANT A, "Facteurs de peuplement d'une Ville de l'Algérie intérieure : Sétif", in les Annales de géographie de l'Algérie. (1953)
4 ROCCA E,"Historique de la Ville de Sétif", imprim. artistique Emile Rocca, Sétif, (1903)
6 PRENANT A, op. cit.
The case of Setif is interesting, there are some old neighborhoods crumbling under the weight of a high residential density and an unacceptable precarious. Thus, it seems urgent to develop knowledge and action on the old fabrics to improve their physical and social conditions.

THEORETICAL AND METHODOLOGICAL FRAMEWORK

The search strategy combines the typo-morphological urban analysis of the built environment, the practices and customs study and the meanings attached to it. This approach considers the urban environment as an organized and structured objects and ideas.

Morphological reading becomes essential to grasp the mechanism of formation of the urban composition. The urban analysis typo morphological studies the buildings in their contexts, with their surrounding public and private spaces.

In this Study, to collect data both quantitative and qualitative approaches are used. Data collection tools used includes interviews, review and analysis of documents, photographs, observation and measurements.

Data collection is conducted in two phases. The first phase demands measurement of houses and the size and extent of the transformed house and general survey concerning the resident. The fieldwork was conducted between September and November 2008.

The second phase of the fieldwork studies was carried out between January and March 2009 in order to correct the first phase. The main issue includes the social economic conditions of the residents, physical structures and spatial qualities and peoples views, with regard to housing transformation.

Housing transformation during the period of the study has been observed and observations on the use of both indoor and outdoor space focused on domestic activities. Another method was employed where houses and plots have been measured and drawn (Plans, sections, plot size, outdoor space and indoor space).

The plans show different types of housing transformation. A total of 20 houses, where in-depth interviews were conducted, they were also measured indicating phases of transformation, especially extensions. The drawings and photographs provided a foundation for making an analysis of the housing transformation. A total of 20 houses were also measured and their plans drawn.

ARCHITECTURE AND URBAN FORM OF BEL AIR

Bel Air is located on a flat site in the northwest part of the town of Setif [fig.1] and [fig.2]. Its grid pattern is characterized by parallel streets along the site from south to north while being crossed by orthogonal streets from east to west. The east-West main Street passes through this quarter.
Currently, there is no wasteland between the historic center and Bel Air. Its location, fifteen minutes walk from the downtown, is strategic and provides it a direct contact with the city center. The area between the historic center and Bel Air is composed of different public facilities used by all the Setifian.
The bloc as the built element composing the grid plan of Bel Air is the most characteristic feature of the colonial urban system. This bloc appears in various shapes (rectangular and oblique). Divided into rectangular plots, it is the regulatory piece of the area’s plan. [fig. 2] and [fig. 3]

[fig. 3] Bel Air in 2005  (Source: the author)

The housing unit consists of a room with an area of twenty five square meters and an open space (courtyard) of a twelve square meters. The bloc element in Bel Air is a combination of plots aligned on the street. There is two type of plot in this quarter: the first and most common type is the one with party wall on three sides with a single street facade, the second type is the plot on the corner with two party walls with a double street facade. [fig. 3]

THE SOCIO-SPATIAL PRACTICES

The objective here is to understand through space, time and usage the dynamics of changes of the Algerian society in general and of this neighborhood in particular. The smallness of these homes and their lack of modern conveniences did not prevent the inhabitants to have very good neighborly relations and develop relationships much more intimate than one would have thought. The interior of the house has been extended to the street that has become the common area of neighboring rest area, sociability, discussion, parties, etc.
Urban transformations in a poor resettlement quarter
case of Bel air in Sétif - Algeria
S. Madani & A. Diafat

[fig. 4] Bel Air in 2008  (Source: the author)

<table>
<thead>
<tr>
<th>Bloc Number</th>
<th>Number of Plot in 1994</th>
<th>Number of Plot in 2010</th>
<th>Dwellings</th>
<th>Not Transformed</th>
<th>Households</th>
<th>Totale pop</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>02</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>02</td>
<td>12</td>
<td>12</td>
<td>10</td>
<td>02</td>
<td>06</td>
<td>13</td>
</tr>
<tr>
<td>03</td>
<td>12</td>
<td>11</td>
<td>11</td>
<td>05</td>
<td>07</td>
<td>08</td>
</tr>
<tr>
<td>04</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>03</td>
<td>09</td>
<td>14</td>
</tr>
<tr>
<td>05</td>
<td>12</td>
<td>12</td>
<td>11</td>
<td>01</td>
<td>08</td>
<td>04</td>
</tr>
<tr>
<td>06</td>
<td>12</td>
<td>12</td>
<td>11</td>
<td>01</td>
<td>07</td>
<td>05</td>
</tr>
<tr>
<td>07</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>02</td>
<td>08</td>
<td>10</td>
</tr>
<tr>
<td>08</td>
<td>12</td>
<td>12</td>
<td>10</td>
<td>02</td>
<td>03</td>
<td>09</td>
</tr>
<tr>
<td>09</td>
<td>12</td>
<td>11</td>
<td>09</td>
<td>02</td>
<td>03</td>
<td>09</td>
</tr>
<tr>
<td>10</td>
<td>12</td>
<td>11</td>
<td>09</td>
<td>02</td>
<td>08</td>
<td>04</td>
</tr>
<tr>
<td>11</td>
<td>12</td>
<td>11</td>
<td>10</td>
<td>01</td>
<td>08</td>
<td>08</td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>12</td>
<td>11</td>
<td>01</td>
<td>03</td>
<td>09</td>
</tr>
<tr>
<td>13</td>
<td>12</td>
<td>11</td>
<td>09</td>
<td>02</td>
<td>07</td>
<td>05</td>
</tr>
<tr>
<td>14</td>
<td>12</td>
<td>12</td>
<td>11</td>
<td>01</td>
<td>03</td>
<td>09</td>
</tr>
<tr>
<td>15</td>
<td>12</td>
<td>10</td>
<td>09</td>
<td>01</td>
<td>09</td>
<td>03</td>
</tr>
<tr>
<td>16</td>
<td>12</td>
<td>12</td>
<td>10</td>
<td>02</td>
<td>03</td>
<td>09</td>
</tr>
<tr>
<td>17</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>10</td>
<td>08</td>
<td>10</td>
</tr>
<tr>
<td>18</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>08</td>
<td>06</td>
<td>15</td>
</tr>
<tr>
<td>19</td>
<td>14</td>
<td>13</td>
<td>10</td>
<td>03</td>
<td>08</td>
<td>06</td>
</tr>
<tr>
<td>20</td>
<td>14</td>
<td>13</td>
<td>12</td>
<td>01</td>
<td>07</td>
<td>07</td>
</tr>
<tr>
<td>21</td>
<td>10</td>
<td>10</td>
<td>09</td>
<td>01</td>
<td>06</td>
<td>04</td>
</tr>
<tr>
<td>22</td>
<td>18</td>
<td>16</td>
<td>16</td>
<td>07</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>23</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>02</td>
<td>08</td>
<td>11</td>
</tr>
<tr>
<td>24</td>
<td>10</td>
<td>09</td>
<td>08</td>
<td>01</td>
<td>08</td>
<td>02</td>
</tr>
<tr>
<td>25</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>05</td>
<td>05</td>
<td>11</td>
</tr>
<tr>
<td>26</td>
<td>10</td>
<td>10</td>
<td>08</td>
<td>02</td>
<td>08</td>
<td>02</td>
</tr>
<tr>
<td>27</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>05</td>
<td>05</td>
<td>10</td>
</tr>
<tr>
<td>28</td>
<td>04</td>
<td>04</td>
<td>04</td>
<td>01</td>
<td>03</td>
<td>04</td>
</tr>
<tr>
<td>29</td>
<td>10</td>
<td>10</td>
<td>09</td>
<td>01</td>
<td>04</td>
<td>06</td>
</tr>
<tr>
<td>30</td>
<td>22</td>
<td>21</td>
<td>17</td>
<td>04</td>
<td>09</td>
<td>13</td>
</tr>
<tr>
<td>31</td>
<td>18</td>
<td>17</td>
<td>15</td>
<td>02</td>
<td>09</td>
<td>09</td>
</tr>
</tbody>
</table>
The number of blocs is 36 and the initial number of plots in Bel Air is 438. In 2010 the number of plots cut down to 421. This decrease of seventeen (17) plots can be explained by the fact that people bought adjacent plot to their house to get a larger one with an area of 96 m². We note that the number of the transformed units is 209 of 438 (47.71%).

The number of occupied dwellings is 383 while the number of unoccupied homes is 38 (9.02% of dwellings are inhabited). The residents left Bel Air without releasing their homes. The number of households decreased from 554 in 1994 to 422 in 2010 (23.83%) and the total population decreased from 2999 in 1994 to 2027 in 2010 (32.41%).

Tab. 1. Data concerning Plots, changes and households of Bel Air. (Source: the auteur 2010)

This area has nevertheless retained its purely residential and discreet appearance due in part to the absence of commercial activities in its secondary streets. Thus, this type of street becomes a semi-private support for social practices and household activities, a playground for children and parking, especially a collective space and a natural extension of the home.

HOUSING UNITS:
The unit is composed of two spaces: the room and the courtyard. The house is a multipurpose space (in one room are held several functions depending on time of day). However, changes made to the initial unity helped to diversify the use of domestic space through additional rooms.

The location of plots along the street and the lack of space inside the house let to the appropriation of the public space. All plots are of the same shape (rectangular) and have an area of 48 m² which is half built. The blocs have generally an orthogonal layout and rectangular shape, but some blocs have trapezoidal layout on the southeast corner of the quarter. The allotment of the blocs varies between 8 and 22 plots, and their dimensions and area vary between 18 m x 26m and x 18 m x 65.0 m, a bloc area of 468 m² and 975 m².[Tab.1] The 36 blocs are oriented in both directions north-south or east-west. [fig. 5]

The changes made to the dwellings are: addition of a toilet, space for kitchen, up stairs bedroom, a staircase, etc. These changes are made to respond to the needs of each family. In the case of vertical transformations, the courtyard often disappears because its space is very limited. This naturally leads to the appropriation of the sidewalk and the outdoor space that becomes an extension of the intimate space. Also, with the disappearance of the courtyard there is a loss of lighting, natural ventilation and sunlight. So, the volumes added deprive the interior space from Air ventilation and the storm drainage and the snow accumulated on the old pitched roof. It is remarkable that the majority of the occupants change the house without touching the original roof slope. This is partly due to the legal status of these homes; they are the property of the city.
Urban transformations in a poor resettlement quarter - case of Bel air in Sétif - Algeria
S. Madani & A. Diafat

TRANSFORMATIONS ASSESSMENT
The housing type is generally composed of a room of 25m², courtyard of 12m² with a structure bearing walls 50cm thick. The plot is the basic unit of forming let c "is a type plot with a total surface of 48m² (6m x 8m). The courtyard is a transitional space between the exterior and interior. [fig. 6] and [fig. 7]

The first changes have affected the courtyard where some residents added a small kitchen of 7m², moved the toilet in the corner of the plot and shifted the room to the corner. [fig. 8]
A second type of changes: the different needs of families led to a vertical extension by adding an upstairs room above the kitchen with a staircase. The toilet is sometimes kept in the corner under the stairs. This reduced the courtyard to an insignificant area. The great room does not open on the kitchen. [fig. 8] and [fig. 9]

The third type of changes: the main room was divided into two small rooms, one is directly accessible by the courtyard and has no window, and the other has a window that overlooks the kitchen. A space for kitchen is added by using half of the courtyard and a small bathroom, leaving only a corridor of one meter width. Upstairs, a room and overhanging the outside walkway was added, and for this case a ladder is used for access. [fig. 10] and [fig. 11].
Urban transformations in a poor resettlement quarter
case of Bel air in Sétif - Algeria
S. Madani & A. Diafat

[fig. 9] Transformation in Bel Air Housing. Source: (the author in 2010)

[fig. 10] Housing transformation plan of Bel Air. Source: (the author in 2008)
The former watering basin place and the space adjacent to the mosque are the only places in the neighborhood. The first was used in the 1980s as a bus stop and it is completely clear today. The second much more intimate and planted, becomes the support of several activities, such as children's play area, parking, dryer, etc…

Concerning the facilities, the most important ones were created during the colonial period (primary schools). They are organized along the main axes and have an important aesthetic and architectural value. [fig. 4].

After the independence, various public facilities (health center, maternity, high school) were built and gave an urban dynamic to the entire neighborhood.

In this quarter the space for commercial activities is the result of changes in some plots. The majority of these activities is business-oriented for basic supplies and has the same area of a room (48 m²). It is worth noting the presence of street vendors occupying the street corners and the space outside the mosque.

RESULTS

In period of housing lack in Algeria, the diminishing capacity to supply social housing left Bel Air resident without any alternative, but to transform their houses in an informal way. It is apparent that with these shortages in the supply of a new social housing, dwelling transformation remains one of the major options especially for the poor households and should be regarded as a natural response to housing demands.

A majority of the residents prefer to extend their houses to meet their needs rather than moving because of their limited resources and also the good location of Bel Air neighborhood. In fact, Bel Air
neighborhood has an important location, very close to the historic center and that is easier for residents to just walk for shops and public facilities.

The result shows that uncontrolled housing transformations are reducing the urban quality of the neighborhood. Issues, like building lines and plot coverage have not been considered and changes do take place without observing rules and regulations; this has increased thermal discomfort.

The “laisser faire” attitude of the local authorities is obvious. They should play a positive role to encourage and support the process and to support people to undertake transformation within a regulatory framework to improve environmental quality.

CONCLUSION

It is likely that many people will continue to transform their houses in order to fulfill their socio-economic desires. Therefore, the following recommendations should be pursued:

- provide the necessary means for a rational and adequate diagnosis and study while preparing technical and financial feasibility conditions.
- afford incentives and assistance for self-help rehabilitation, in terms of subsidies and building materials provision.
- establish a permanent operational team in each neighborhood to conduct the process of study, proposal, management and technical assistance for users.
- Offer training for management officers as well as for the involved workers in the rehabilitation of this housing and the forgotten know-how to create small handicraft jobs.

It is remarkable in Bel-Air that the grid plan of this neighborhood resettlement, founded in the 1920s, continue to accept the subsequent urban transformations preserving the original urban form, despite the age of a significant portion of the building they support. While the frame often undergoes changes and substitutions are made, the styles vary, but the structure of this area is not significantly changed.

It is also interesting to know how the people of the old Bel Air are committed to their neighborhood. Neighborhood habits, relationships, traditions of community life, customs and social practices, all that factors are determining this kind of territory. A significant portion of the population of Bel Air remains committed to these conditions because of their very limited resources, to the point that it is impossible to convert or restore their homes affected by obsolescence.

The analysis shows that changes initiated by the residents can not meet their minimum requirements and their growing social demand in terms of quality, comfort and safety. Indeed the main constraints to the mutability of this urban fabric are:

- The legal status: the houses are owned by the municipality, the people are only tenants. The land is held by leases for the benefit of many and various private owners
- The plots are too small; they have an area of 48 m2 and that does not even meet the basic needs to live in decent and sustainable conditions.
-The state of the Bel Air neighborhood is completely obsolete. Built according to other assumptions these "homes" are becoming less relevant and no longer corresponding to the program elements of our time.

REFERENCES


André PRENANT, "Facteurs de peuplement d'une Ville de l'Algérie intérieure : Sétif", in les Annales de géographie de l'Algérie. (1953)


E. ROCCA, "Historique de la Ville de Sétif", imprimerie artistique Emile Rocca, Sétif, (1903)