

Transformations between Design and Implementation in a Participatory Housing Estate: Case Study Al-Mostakbal Housing Estate in the City of Biskra

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Abstract

The housing estate, in its different forms, presents a planned response to housing needs, and could a priori meet this demand while providing a framework. As a mode of operation, it allows the expression of individual residential and architectural projects. However, today we observe that the external spaces of the housing estate are rather neglected and incompatible with the common and shared social life. This article presents the main results of a comparative descriptive analysis carried out on a housing estate in Biskra, namely Al-Mostakbal. The main objective of this research is to understand the phenomenon of transformation and to identify the factors influencing this act. The comparative method was used to identify and quantify transformations.

Key words: Residential allotments, transformations, designs, user aspirations.

INTRODUCTION

We cannot consider the housing estate as a simple procedure, detachable from the concrete effects it produces on urban form, the desire for access to the individual house, can coexist with a collective requirement: to create a suitable urbanity in this form of development.

By adopting a historical vision, Anne-Sophie(Cléménçon 2015) shows that the housing estate can be considered as 'one of the fundamental processes of the making of cities, and of the urban in general, and(CALLAIS 2003). Also shows, through an analysis of the case of Bordeaux, that the housing estate has been 'the main mode of making large cities since the Middle Ages', and that it has been for a long time able to 'participate in a coherent morphological constitution of the city.

However, recent research has shown that the direct causal relationship between the procedure used and the form produced does not stand up well in the case of the housing estate to the realities observed in the field, which are marked, on the contrary, by significant heterogeneity (Direction technique Territoires et ville 2015)

Masbouni (2008) listed and analyzed in her book "Faire la ville avec les lotissements" (Making the city with housing estates) singular operations, which contrast in their morphology with traditional housing estates and which are all reasons that make her hope for the 'discreet and sustainable renewal of the urban and architectural organization of this urban production'. These analyses are in line with the results of works in urban morphology, which also understand the housing estate as 'a historical mode of urban creation [...] where the land was cut up before building' (Bories 1986), and consider it in the light of numerous historical examples as an 'operational tradition which has proved its worth both from the point of view of quantitative production and qualitative appreciation' (Bories 1986).

Housing is a vital social and economic need, and it is a constantly evolving theme for human well-being. Various research projects are being carried out on this theme to highlight its contribution to the socio-economic and cultural development

of societies. Current research on housing and in particular housing estates and their transformations has been the subject of several works, in particular those carried out by (Panerai, Demorgon, and Depaule 1999), even if these works are of a descriptive nature, they constitute an in-depth knowledge of the housing estate, which will participate in the development of the production of the built framework to join modernity to the successful urban solutions of the past to ensure a completed urbanization (Alkama 1995).

The generation and design of our housing estate has been reduced to a land division where the public space has little to do with anything other than serving the plots. The resulting poverty of space and the incompleteness of the constructions are part of the incoherent image of the landscape of the analyzed housing estate. The different levels of transformation that the habitat undergoes is to have detected a new typology that is similar to a mental model of a modern, profitable and valorizing habitat, towards which people transform even if their financial means do not allow it, and they drag out twenty years of construction without finishing it. It seems useful to us to analyse these models, including the organization and causes of these transformations (Adad 2005). In addition, it is imperative to know what it provides as an image of the individual house in a residential estate, and what it has created as an unbalanced urban image. Bauer and Lataulade (2000) emphasized that the housing estate 'has been, and remains, highly criticized for the poverty of urban and architectural design of a large part of its production', whereas the factors at the origin of the transformations and their repercussions on a fabric which is the image of the entrance to the city of Biskra and which is presented as a self-promoting residential plan are not. Considering therefore, according to the Belliot (2002) example, that 'a city cannot be built durably against its inhabitants', we think then that the housing estate could take up an important challenge of the ordinary manufacture of the city (Herrmann 2017).

The Al-Mostakbal housing estate in Biskra, a city in the south-east of Algeria, brings an analytical dimension to the understanding of the phenomenon of transformations, especially a large gap is observed between what was conceived and the realization, so at what level are these transformations? Moreover, by whom are they due?

METHOD AND MATERIALS

In order to answer this question, we chose the Al-Mostakbal housing estate at the northern entrance to the city of Biskra, using the comparative descriptive research method. In this respect, we agree with Marc Maurice, for whom the comparative approach 'constitutes an intermediate but indispensable stage on the way to a generalization (or theory) to be constructed' (Maurice 2014) also adopted by (Besson 2012). The manual survey technique allowed us to identify the transformations, all the houses were surveyed (plans and facades) and compared to the standard plan provided with specifications for respect to execution.

We will study the following criteria:

Formal transformation: at the level of:

- ✓ Urban façade.
- ✓ Architectural plan: by dividing the plot, by adding surface area,
- ✓ Transformation of the facade (height, windows, decorative elements, cornices, balconies, number of doors and garage),

Spatial and functional transformations: at the level of:

- ✓ Modification of the architectural plan
- ✓ Permutation of functions

CASE STUDY

The Al-Mostakbal allotment is located in the north of the town of Biskra in Algeria, a semi-arid town; it is structured in orthogonal blocks parallel to the RN 83 (a major dual carriageway) Tassili road with secondary perpendicular carriageways of 06 m wide. The 63 lots have an identical surface area of 234 m², allocated since 1992.

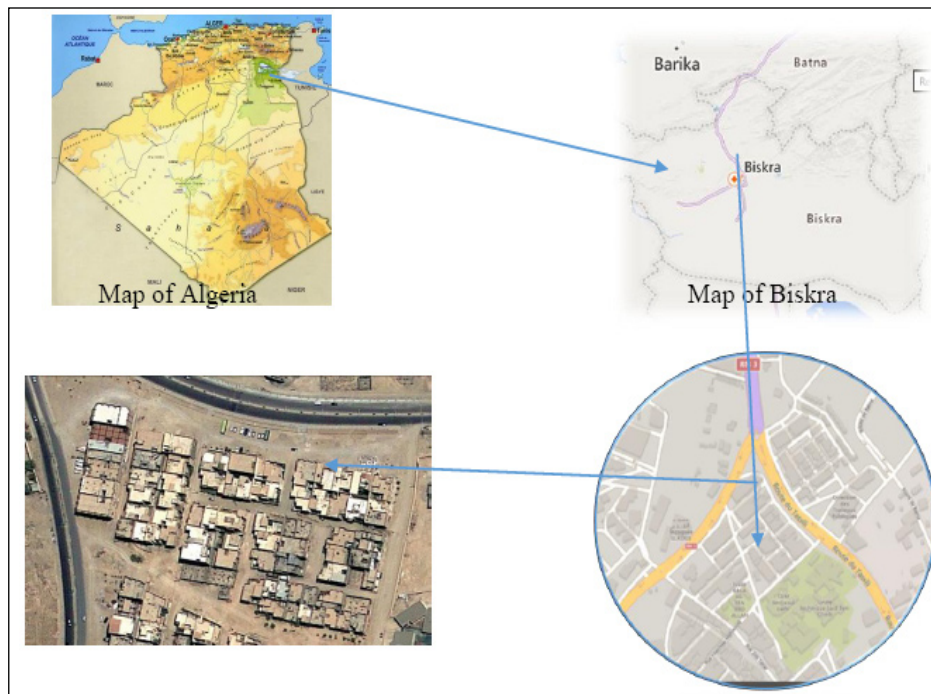


Figure 1. MOSTABAL housing estate in Biskra-Source: (Google 2022)

The specifications were drawn up by a SETEB consultancy firm for its own employees. The first article of the first chapter of the specifications explains that these detailed urban planning regulations determine the prescriptions to be applied in order to preserve the collective interest in the allotment and to obtain a functional and coherent residential fabric.

It clarifies that the prescriptions oblige the developer and builder as well as their successors in any capacity whatsoever, subject to the legal and regulatory provisions in force applicable to architecture, construction, environment, health, etc., and that no modification may be made to these prescriptions.

All the houses in the subdivision represent self-built housing planned with a building permit (figure 02). The specifications were drawn up by a SETEB engineering office for its own employees. The first article of the first chapter of the specifications explains that these detailed urban planning regulations determine the prescriptions to be applied in order to preserve the collective interest in the allotment and to obtain a functional and coherent residential fabric.



Figure 2. Plan of the allotment -source: (SETEB)

It clarifies that the prescriptions oblige the developer and builder as well as their successors in any capacity whatsoever, subject to the legal and regulatory provisions in force applicable to architecture, construction, environment, health, etc., and that no modification may be made to these prescriptions. All the dwellings of the subdivision represent self-built housing planned with a building permit.

RESULTS AND DISCUSSIONS

Formal Transformations

Transformation of the Urban Facade

The urban facade, we already observe that the proposed facades have been modified or totally transformed (see the two figures 03 and 04). Displacement, substitution, deletion of garages, walls and verandas, creation of commercial premises ...etc. These acts influence the image of the residential area and create a negative perception of the urban area and of the whole city.



Figure 3. Urban facade proposed by the design office



Figure 4. Western urban facade of Al-Mostakbal housing estate

The plan

- *Division of the lots:* 21.5% of these houses are on a half lot (the specifications stipulate that the lots are not divisible), but due to financial weakness, the buyer sells half (117m²) to be able to build.
- *Addition of surface area:* The purchasers justify this irregular right of way by the need for alignment with the lots on the same line, (fig.05) by cutting into the land intended for the car park and for external development: green space, pavement, etc. Also, the use of pavements and urban development areas for the display of merchandise as an extension of the commercial premises presents aggression to the residential aspect and the daily life of the inhabitants.



Figure 5. Surface additions

✓ *Transformation of the facade or evolutionary (extension)*

Facades with horizontal limits with windows treated with a tile of more or less reduced dimensions, in the ground floor the windows give onto a veranda (they are protected for lots with a single facade) or grouped by symmetry on the vertical axis of the second facade, and delimiting the volume of the foreground on the floor.

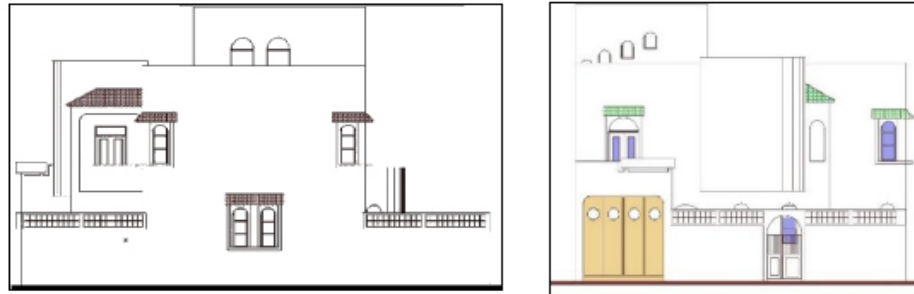


Figure 6. Typical plan facades, by the design office

The form results from the first impression perceived from the outside, a set of well-arranged volumes with architectural details, marked with simplicity as a basic principle to achieve a well-arranged urban façade (figure 7). The composition of the facade with three bays also reflects its post and beam structure with a reasonable and economical grid and easy-to-execute ridge and gable traced with clapboard, tile, or simply in simple horizontal lines.



Figure 7. Urban facade proposed by the design officeModelled by the author

Spatial-Functional Transformations

Modification of the Plan

The transformations at the level of the plan affect the aspect of the function of the residential space: the strategies of appropriation of spaces often express socio-economic needs, and financial profitability is the most sought-after factor.

At the level of the ground floor, the transformations respond to socioeconomic needs which often go beyond the simple concern to improve the family income, which is sometimes transformed into an economic investment.

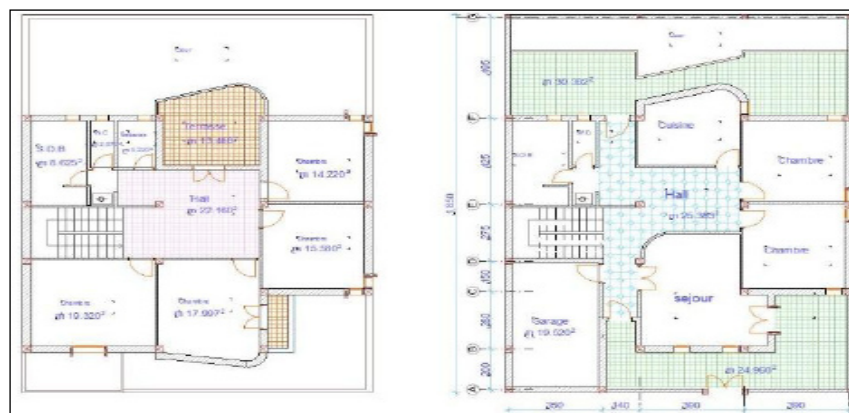


Figure 8. Plan view 1st floorDRC of the typical plan. Source:(SETEB)

The specifications of the housing estate clearly state that the spaces on the GROUND FLOOR are intended for housing or garages. The activities carried out within these premises vary between trade and craft. The standard plan (figure 8), conceived by the STEB, research department (organized in cooperative, they occupy the allotment Al-Mostakbal, the surface of the batches 234.00 m² of which 164.00m² of built surface which ensures a coefficient of catch to the ground (F.A.C.) equal to 0.65 and 79m² of non-built surface (veranda 24.96 m² and back yard of 54.33 m²)

It should be noted that the use of standard plans was to reduce construction costs. In projection the houses are almost all built according to the same plan; with not even a few differences in detail in the facades or roofs to break the monotony of the whole.

The diversity of these strategies is linked to the diversity of inhabitants and their living conditions. These practices are subject to daily and progressive influences and changes that affect the attitudes of individuals and correspond to their habits (Bourdieu 1986).

At the level of the ground floor, (see Figure 9), transformation responds to socio-economic needs that often go beyond the simple concern to improve family income (see table 01, graph01). More than a supplementary income, the commercial premises become a real economic investment. This transformation of garages into commercial premises is illegal.

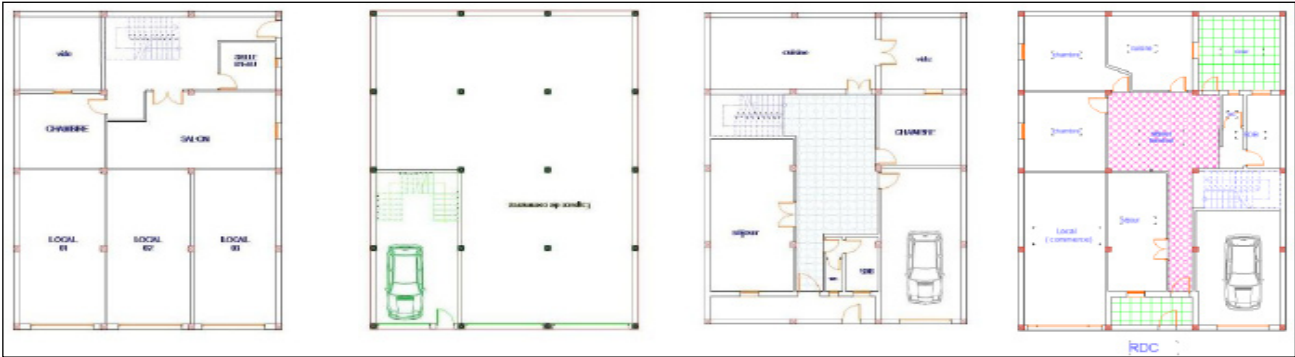
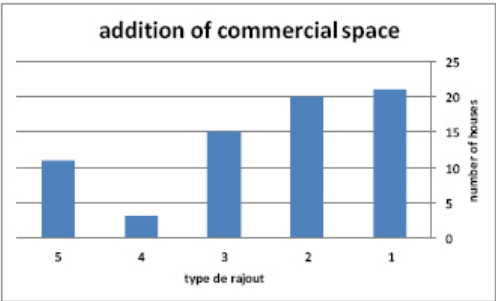


Figure 9. Ground plan No.1 Ground plan No. 2 Ground plan No. 3 Ground plan No. 4

Table 1. Addition business premises

S.No	Type	Number / 64
1	housing with 1 garage	21
2	addition of one business premises	20
3	addition of two business premises	15
4	addition of three business premises	3
5	ground floor into rooms	11

The specifications of the allotments clearly state that the spaces in the ground floor are intended for housing or garages. Commercial premises, offices, and carports are non-existent in the standard plan.



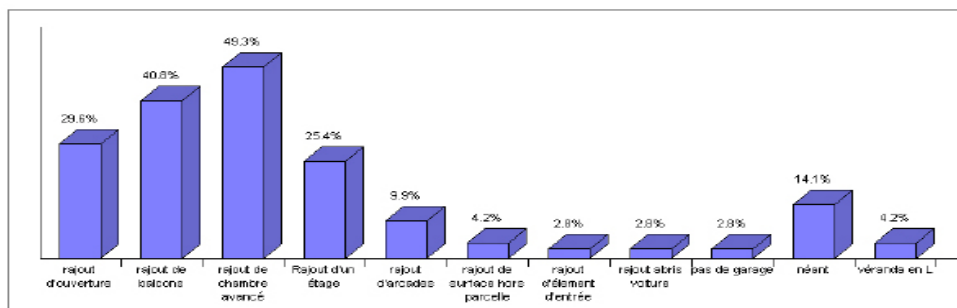
Graph 1. Type of addition

Permutation of functions

The construction of several floors is carried out in the form of superimposed flats. This aspect seems to be an accepted reality in the mentality of the inhabitants, with each level built corresponding to a flat by freeing up the ground floor for profit, and by permuting its functions on the upper floor.

The transformations are multiple; the owners tend to add other floors conceived as independent and superimposed flats by implanting the stairwell in front of their dwellings, with an entrance door at each landing, and are connected by a common stairwell.

We have drawn up tables comparing each construction with the standard plan, which specifies the transformations in terms of plan and façade. We took into consideration the increase or decrease in surface area as well as the position of the room, the floor space coefficient, the floor space coefficient, the appearance of a new room (function) and its position, the disappearance of a room (function) about the standard plan, and the results confirm the total transformation of all the buildings concerning the standard plan (see Graph 02).



Graph 2. Rate of transformations in relation to the standard plan

The insertion of the income-generating function in houses is not only to provide for a need, which is the completion of the construction, but also to guarantee a source of complementary and permanent income, through renting, and also the exercise of a second function (trade).

There are many reasons for this diversity and these developments:

- ✓ Financial profitability
- ✓ Reduced financial means
- ✓ The exercise of a second function (trade).
- ✓ Increased family size
- ✓ The housing crisis

These seem to be the main causes of such behavior. It must be said that the lack of judicial control by the authorities concerned only amplifies these activities.

CONCLUSION

This study concerns the transformations at the level of the Al-Mostakbal housing estate in Biskra, the method of empirical analysis was adopted (comparative and quantitative) by analyzing the transformations and comparing them to the standard plan and the conditions of the approved specifications.

Spatial-functional transformations that represent 45% are translated by modifications that reallocate the spaces in the ground floor to other commercial functions, or to separate the ground floor for rent.

The modifications affected the plot by adding or dividing the surface area by 29%. In addition, the plan was transformed to add one or more commercial premises, to exercise a second function or for rental.

✓ The Formal and Evolutionary Transformation

The changes in the facades and volume are 100% by (deletion/addition, closing/opening) of the facade elements; (windows, doors, balconies and loggias, entrances, recesses), i.e., total transformation of the external envelope. It also takes the form of the extensions observed, vertical in the case of the addition of a floor (65%); and horizontal, by the addition of rooms (47%), or the permutation of the ground floor to the first floor (23%) to free it up for other functions (renting or trade).

The inhabitants have developed transformations and residential strategies whose ostentatious nature allows them to express a social and economic status to meet their aspirations. The specifications regulate all the details of construction in a framework of planned urbanization, concerned with the results on the urban facade with a residential character, approved by the urban planning services.

The diversity of these practices responds to a concern to improve the social conditions of the inhabitants. They also respond to utilitarian and functional needs under the influence of socio-economic constraints, symbolic and cultural values, and personal aspirations. These spatial practices lead, depending on the case, to the emergence of a new type of urban fabric that has generated an urban landscape without a residential architectural character. These spatial practices present forms of overrunning regulations without the authorities' control being effective. And the soaring costs of building land in urban areas favor urban sprawl. This is because residential subdivisions are a relevant object of speculation on the one hand and financial resources on the other.

Whereas the allotment must be the tangible, social and symbolic formula of the diversity of the actors acting in the production, the management, and the use of the built framework, in its elementary measure by the dwelling, or in its collective dimension: the external spaces and the common equipment. The housing estate must favor consultation, accommodation, and agreement between professionals and inhabitants, also through the active presence of public authorities. The housing estate means that the inhabitants can fulfill their wishes in terms of design, and self-production as typical actors of a social and cultural organization which contributes to the improvement of their convivial living space and also the collaboration in taking charge of their built and arranged space.

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