Mutations of a modern habitat. 
The district of Derb Jdid in Casablanca

Carlo Atzeni*, Silvia Mocci

Highlights
The end of colonialism in the decade between the 50s and 60s of the twentieth century, represented a time of great design experimentation and of redefinition of the reference coordinates on the theme of mass housing and more in general of the habitat. North Africa and its large cities were the field for the operational and tangible test of the new principles, those introduced in 1953 by the emerging groups of CIAM 9, who proposed a renewed attention to man as the leading player of living space. In this scenario some architects from those countries distinguished themselves and they were able to break free from the dogmas and combine modernity with tradition.

Abstract
The debate on the habitat in the period of the CIAM IX of 1953 proposes a paradigm shift in relation to the recent past: overcoming “critically” the universalising approach in the conception of mass housing to focus on the analysis of the relationships and hybridisation between European modernity and the local specificities in North African countries. This contribution proposes a study on the district of Derb Jdid in Casablanca, designed by the architect Elie Azagury. The continuous mutation of the habitat developed from local community settlements enriches Derb Jdid with a paradigmatic value in relation to the question concerning the transformation dynamics of residential areas in the contemporary city.

Keywords
Construction history and preservation, Modern habitat, Derb Jdid, Modification and appropriation

1. INTRODUCTION
The debate and study on the urban expansions of the big cities in the former European colonies occupied a leading role within the CIAM 9 of 1953 and fuelled the design reflection on these issues in the first years after the independence of the occupied countries. In particular, some countries of North Africa such as Morocco and Algeria, and their major cities including Casablanca and Algiers, were the experimental field and laboratory of new habitat models, in the period during independence and immediately after it during the long process of decolonisation. The construction of new districts represented at the time a critical urgency with which to respond to the challenges arising from the growing phenomenon of the bidonvilles which grew up in the
margins of major cities [1]. In the landscape of the Maghreb countries of those years, among the most significant project episodes in Casablanca, we should point out: the project for the Carrière Centrales of Écochard, Candilis, Woods and Bodiansky, the “marocain habitat” by Hentsch and Studer [2]; in Algiers: the models of cité de transit by Simounet, the machine à habiter inspired by Le Corbusier and proposed by Miquel and the new domestic monumentalism of Pouillon; more generally, the works of the ATBAT-Africa Group and of the CIAM-Algers group acquired importance [3].

The district of Derb Jdid (the name means “new neighbourhood”, today called Hay Hassani) is one of the most significant urban redevelopments of post-colonial Casablanca (dating back to the early 1960s, immediately after Morocco had achieved independence from France); located in the southwest area of the city, designed by the Moroccan architect Elie Azagury and ascribable to the model of the “habitat évolutif” [4], the settlement is the outcome of a very sophisticated interpretation of the relationship between the individual and collective spheres which is essentially based on the repetition of a patio-house type with different aggregative and dimensional variations. The study highlights the transformation dynamics in place and the modification processes that the district has undergone in the nearly 60 years of life, with the aim of bringing out the critical-ethical sense of the design that characterized the building in the new district.

To this end we propose a rereading of the intrinsic qualities and critical aspects of the project, conceived from the outset as a system-habitat open to change, borrowing the foundational features of the traditional settlement with a rural matrix in order to better interpret the transformation processes of space, shapes, construction and use.

2. HABITAT AS INTERMEDIARY BETWEEN CULTURES AND TIMES

The metamorphosis of the district of Derb Jdid can be reread only by framing it within a process that has its genesis in the long-term settlement, as it is linked to the ordinary transformation practices typical of the living habitats that explicitly translate their dynamism into continuous spatial and formal evolutions. This approach defines the habitat as a “timeless urban fact” in which the initial conception, metamorphosis and life aspects are combined in a unicum and in which the formal and informal are substantiated and hybridised with one another. The densification and modification of the fabric due to space use and occupation practices by the residents, in fact, can be
attributed to a “genetic matrix” whose spatial and use principles belong to the historical and traditional life cultures of the rural villages of the Atlas and pre-Saharan areas, and whose processes are already well consolidated in the informality of the outskirts formed at the beginning of the last century and in the contemporary life.

This “genetic matrix” belongs to the sphere of living as a process of spatial domestication which, in the architecture of Derb Jdid, appears to be resolved in itself even though accepting critical nuances and problems that, even in the North African contexts, are affected by an evident detachment between ordinary practices that are nowadays volatile, virtual and artificial, and the living space, aspect that until recently belonged exclusively to Western societies.

The processes in question are the norm in the post-colonial Maghreb, as regards the new settlements created to give solution to the mass housing problems. Derb Jdid is emblematic in this sense: a modern district that, as occurs in the historical multi-layered cities, embraces different complexity that are cultural in the first place, often contradictory and conflicting.

Derb Jdid is, therefore, like a palimpsest, an outcome of the combination of:

• a culture and design legacy related to colonial modernity which has a pragmatic and functional matrix, interpreted with the French “culturalism” of which Écochard was a mouthpiece; a legacy that has indelibly marked parts of the city and that has affected the settlement characters with which the cultural tradition had hitherto generated and governed the evolutionary processes of the habitat;

• a new urban settlement conceived by Azagury, a native designer from Morocco and educated in France, who interpreted the rigid grids of Écochard in an innovative and progressive way, predisposing them to accommodate the modifications of the traditional habitat, through the reinterpretation of the introversion culture typical of these places that is formalised in the choice of morphological and typological invariants of the patio, of the cell aggregation and of public spaces between the aggregates, conceived as regulatory tools of such transformations;

• a complex set of local traditions and identities borne by the populations which were uprooted and transplanted into the city; this load in fact contributed decisively, in a short time, to the mutation of the new district according to the logic of appropriation, modification and necessity, on the one hand, and of social emulation, on the other; these are practices which, as said, are rooted in local history over time and absorb the possibilities offered by the “habitat évolutif” proposed by Azagury;
• the strong nationalism of the new state of Morocco that precisely in the years following independence after more than a century as a French protectorate, redeveloped the degraded outskirts of Casablanca in an attempt to “rebuild” the national identity; at the same time, local residents from the rural villages of the Atlas and pre-Saharan areas, and their children, developed the self-awareness of being leading actors in the construction of this new identity.

The capability of mediating between the innovative aspects of modernity and the genetic principles of the traditional local settlement culture represented one of the most important peculiarities of Azagury’s work who, in this way, was capable of inscribing his habitat in a long-term, cultural perspective. The outcome is a system characterised by a continuous process, never fixed in a static formal configuration and therefore it cannot be framed in a characteristic image, but it is governed by its inherent adaptive properties in relation to the changing complexity of the society uses. Azagury had the merit of embracing the principles of modern architecture effectively, reconciling them with the places, climate and culture of living of the indigenous populations. Mario Losasso summarises this adaptive process stating that “This mediation has formed a link between modern innovation and traditional culture, in which the architecture works have proved capable of adapting themselves to the changing use conditions where this aspect was not programmatically predictable” [5].

3. PROCESSUALITY OF THE HABITAT AND WILLINGNESS TO CHANGE

Derb Jdid, among the many modern experimentations on the topic of the habitat for “le plus grand nombre”, is certainly an important case study in the Mediterranean area. The 50s and 60s of the twentieth century represent a particular historical moment for Morocco, a period of political and social restructuring, after the independence from France, in which there was a keen focus of the Government to act close to the population in the process of rebuilding both the city and a new social-national identity.

Giving an answer to the critical and strong demand for new houses on behalf of a population that relied on the new Nation and on new social and urban policies for high expectations of renewal, was obviously an aspect of primary interest for the State; it had to build a new city and new districts for residents which still were far from urban lifestyles and that did not have, for the most part, a regular and sufficient income to support a rent exceeding 3500 francs per month.
The new State activated a complex urban renewal programme with renewed policies and housing strategies aimed to facilitate new opportunities for accessing private property and to ensure low-cost payments for those who had an income. The public bodies provided temporary emergency actions for that part of the population which had no resources, reserving a minimum supply of primary collective services [6].

The new settlement of Derb Jdid was built between 1957 and 1963 in an area that underwent the rapid urbanisation due to rural migration of populations from the desert areas during the first decades of the twentieth century. In particular Azagury was commissioned for the design of a part of the overall programme - consisting of the construction of the first 300 apartments - by the Ministry of Urban Affairs in February 1957.

The new habitat for the Muslim populations was conceived by Azagury starting from the reinterpretation of places and traditional living cultures, proposing...
a connective and generous public space between the blocks, modulated in public/collective space and public/private space open to the population. With a different approach from the urban planner Écochard, Azagury proposed a system of potentially available space for the appropriation by residents, public spaces with a partially non-defined meaning, available for different uses over time and governed by the plurality of the players. In this way the designer “gives space to a modernity” which does not fix definitively life forms and figures but that it intends to hybridise with places and cultures, predisposing prepared settlement grids adaptable to change. Although starting from a modern approach to the living culture, the principles that govern this
The proposal cannot be considered as a simple “modern reconfiguration” of the rural-traditional architecture, but meets the needs of a changing society by exploring new living models moving between the individual and collective. Azagury continuously sought a character of specificity and diversity of the habitat which he then translated into detailed and complex formal systems, through the typological diversity of the houses and the morphological organisation of each fabric unit.

The volume composition and aggregation is dense and articulated and finds its counterpart in the form of the open space, which is ample and suited to compensate the minimum and limited condition of the living fabric. Therefore, the different variations of volume aggregations always attribute different formal and dimensional characters to the open space, and at the same time the “generosity” of such open space contributes to enriching life quality and environmental quality on the urban scale. Amplitude and configuration become the main features of the resilient character of the district and fundamental elements through which the different gradient between public and private space between the buildings is established. In fact, the character of public space becomes gradually semi-public and then almost private where the volumes close themselves in a “C” or “L” shape and embrace relational spaces which are subject to spontaneous appropriation by the inhabitants.

The proposed residential models are various and are drawn from the well-established modern typological heritage of the masters which welcome contaminations and hybridisms from the rural living culture. There are linear collective buildings on 4-5 levels accompanied by terraced houses. The patio type, however, is the most explored one in its various configurations and variations, since it is the most distinctive element of local traditional cultures.

The drawings of the designer highlight the peculiarities of the urban space related to amplitude and, at the same time, the variability of the open space configurations. The continuous experimentation on modular layout systems emerges and allows the designer to define solutions in which the open space is not only translated into paths and entrances to the houses but it becomes a wide public space, open to collective uses and, for this reason, susceptible to changing over time.

The variations at the scale of the dwellings and their aggregation arise from the need to develop a typological diversity and are based on the principles of...
rotation and mirror imaging that generate a complex fabric which is diversified in the articulation and combination of forms and types.

Azagury was perfectly aware of the design experimentations carried out a few years earlier and showed a critical attitude in dealing with the issues of appropriation, modification and fabric growth, albeit basing the project principles on the concepts of “habitat adapté” and “habitat evolutif”, which were also the base of his previous experiences. His previous works (referring mainly to the Michel Écochard’s project for the Carrières Centrales) were designed and constructed according to an idea of a horizontal fabric on a single level (except for collective buildings which were developed over several floors, designed by Candilis, Woods and Bodiansky). According to Azagury, in all the property changes of the units, these choices led to the closing of the patios to gain another closed space, thus limiting its environmental potential (lighting, ventilation etc.), while in other cases the houses were enlarged with another floor. To reduce these negative aspects Azagury provided for the possibility that every home could have a height growth in order to adapt to the changing needs of families over time [7].

In this way, the interpretation and governing of the spontaneous appropriation processes was tested for the first time in an explicit and programmatic way. Such appropriation processes, for example in the Carrières Centrales, had significantly questioned the deterministic approach to the project of Écochard straight after the work completion. The grids of Écochard, in fact, were excessively rigid in their articulation and spatial configurations, were unable to embrace modifications and in a short time incurred significant difficulties due to the mutation processes.

Conversely, Azagury addressed these issues by proposing an “evolving” organisation of the general system, for the construction of the first 300 apartments. The single-level patio houses already included the possibility of another floor. To reduce these negative aspects Azagury provided for the possibility that every home could have a height growth in order to adapt to the changing needs of families over time [7].

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4. MUTATION AND APPROPRIATION

After approximately 60 years from its construction, the district appears heavily transformed in its volumetric consistency and in the legibility of spatial and language characters provided for in the original project. The settlement of patio houses, with its complexity given by the varied repetition of individual units articulated on one or more levels (living units that constitute the minimum aggregation modules on urban scale), has changed to a habitat whose density...
is at least doubled through processes of juxtaposition and superimposition of new volumes, developed approximately on four levels with the progressive occupation of the transition spaces, patios and roofs, considered as new “foundation soils” for the construction of the building additions.

Nevertheless, the conception of public space and of the intermediate scale predicted by Azagury allowed the district to develop without losing the structure and image of a high quality habitat, also thanks to the original low density that favoured the modification of the system and the intensification of the built environment. The fieldwork, which lasted several years, allowed us to identify the recurring categories of transformations. Some housing types showed a greater degree of convertibility, mainly due to the presence of the patios, terraces and loggias, i.e. all those “empty” elements that are still open, and that could be easily closed by the inhabitants to extend the living space.

The “Zoe” type is described here as a specific example to describe the manner in which the inhabitants modified their dwellings. For example, in the house of an old woman, which was assigned to her in 1958 with a reduced rent fee (she still pays a very small rent of only 35 Dirham, corresponding to more or less 3 euros), the patio is now completely occupied by a new volume used as a living room; within this space, moreover, there is a new staircase which gives access to an upper level that now includes a new room and a small bathroom; this extension has the same area as the ground floor new space.

This example represents a generalised fact stating the transformation practices that have affected all the types that constitute the living fabric, albeit with...
different degrees: “Arsene”, “Lea”, “Felix”, “Nestor”.

The condition of extreme urgency for the re-settlement of the populations between 1958 and 1959, put the validity of the types and their adaptability and processing capacity, to the test. From the beginning, some “emergency habitat” solutions were developed, consisting of the massive construction of the ground levels of the “Omer” type in which, either the kitchen or the toilet or the stairs were built to allow two families to immediately occupy the entire surface of the dwelling, each of which would have benefited from a bedroom and a small service patio. The “Omer” type is a terraced house type on two levels with a small front patio and a larger rear patio; the total surface of the plot is 53 sq.m and the covered surface is 33 sq.m. This type, as well as others, has undergone many modifications over time, both in the property reorganisation and in the expansion of the dwelling reaching the limit but diffused condition with even five levels in height.

For this reason, the entire portion of fabric with the “Omer” type is nowadays completely altered. In this case, the substantial modifications, which although deny the rigour and the conception of the complex by virtue of a “necessary” appropriation, have generated a road façade which is nevertheless complete; the original plan based on a constant and repetitive elementary module has facilmente per gli abitanti è stato possibile chiudere per acquisire e/o ampliare lo spazio abitativo di partenza.

Il tipo “Zoe” viene qui impiegato a titolo esemplificativo per mostrare le modalità con cui l’abitante ha modificato la propria abitazione. Nell’esempio della casa di una anziana donna, assegnataria a partire dal ’58 dell’alloggio a canone ridotto (tutt’ora la donna paga un affitto estremamente esiguo di soli 35 Dirham, equivalente di poco più di 3 euro), lo spazio del patio è stato totalmente occupato da un nuovo volume utilizzato come soggiorno della casa; all’interno di questo spazio, inoltre, la costruzione di una scala ha permesso di occupare anche il livello superiore per un ingombro pari allo spazio sottostante in cui sono stati ricavati un ulteriore vano e un piccolo bagno.

Questo esempio rappresenta un fatto generalizzato di pratiche di trasformazione che hanno investito, seppur con gradi differenti, tutti i tipi che compongono il tessuto abitativo: “Arsene”, “Lea”, “Felix”, “Nestor”. L’estrema urgenza re-insediativa che interessò in particolare il biennio tra il ’58 e il ’59, mise alla prova fin dall’inizio la validità dei tipi e la loro capacità di adattabilità e flessibilità trasformativa. Da subito, infatti, furono adottate soluzioni d’”habitat d’urgenza” che consistevano nella costruzione intensiva dei primi piani del tipo “Omer” nei quali, né la cucina, né il servizio igienico, né le
allowed for an evolution of the living units according to rules that we could call “conditioned”.

The linear collective types have undergone minimal changes. The original conception of the type (“Maxime” and “Emile”) limited in a significant way the modification and growth possibilities. The only modification that occurred is the simple closing of the loggia as an extension of the kitchen area. This type of transformation is poorly identifiable from the outside of the buildings, but emerges from the comparison between the archive documents and the current state; from a careful analysis conducted inside the dwellings, it emerges, in fact, that the new plaster in correspondence of the closing of the loggia, is applied in continuity with the existing one of the original masonry.

5. CONCLUSIONS

Azagury proposed a cultured, advanced and dialectic interpretation for Derb Jdid, between the local and traditional living cultures and the instances of renewal that the post-colonial period required, in accordance with the experimentations under way at that time in other areas of North-Africa and the

Figure 5-6. Modification processes of housing with occupation of patios, terraces and juxtaposition of volumes on the fronts (photo by S. Mocci).
former European colonies. His morphological and typological experiments focused on a closer approximation to man’s needs, and, above all, introduced in a totally innovative manner the idea of a sustainable city, porous, permeable and open to modifications, at a time when this concept was being defined, focusing on its connotations and problems, thanks to the contributions of the Team X. The idea of a city whose formal configuration, structured through a strong typological complexity, admits void portions, a city whose spatial character is based on the alternation of solids and voids and on the relations generated between them [8]. The conception of a habitat whose articulation between solids and voids ensures, on the one hand, the intimacy and autonomy of the domestic space and, on the other, the environmental comfort through natural ventilation and solar irradiation control. The patios are therefore sustainable devices of the urban system proposed by Azagury, “guarantors” of the resilience of the local living culture and leading actors of the innovation and continuity process within the tradition.

The alterations of the fabric and the radical mutation of the relations between the parts arising from the modification processes that are constantly occurring, rather than being considered as limiting aspects for the formal quality of the whole system, appear a tangible sign of a settlement which has been fully appropriated by the resident community and has been transformed over time and adapted to new needs.

Although some of these transformations may be considered as critical aspects, because sometimes they altered the original environmental quality (substantially altering in some cases the natural ventilation and the balances of the shadow system), the metamorphosis that the district underwent is certainly representative of the “open-to-change” conception that Azagury included in the overall structure and, as such, constitutes an aspect of extreme interest which confirms the habitat as a place of dynamic and adaptive processes governed by the variability of the uses and not by the immutability of spaces.

6. REFERENCES

un aspetto di estremo interesse che conferma l’habitat come luogo dei processi dinamici e adattivi governato dalla variabilità degli usi e non dall’immobilità degli spazi.