

# Landscapes of Desert

Architecture and city around the Islamic Sahara

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Abstract: This paper is an excerpt of a PhD Thesis in “Architecture. Theories and project”, presented at DiAP – Department of Architecture and Project of Sapienza Università di Roma in April 2012. Thesis’ title: “Around the Sahara desert. Enduring Topographies between Architecture, Desert and City”. Supervisors: professors Ludovico Micara and Raffaele Panella. In this short text we will examine scientific premises and limits concerning a broader field of study, the settlement mechanism around the Sahara desert, deepening the process of landscape construction, to be intended as a complex relationship between religion, geography and human adapting ability.

Keywords: landscape-desert, Islamic settlements, urban morphology, Sahara.

## *Architectural type and community rules*

“Each city is in itself all the cities”<sup>2</sup>: beyond the complexity that characterizes the meaning of the Arab-Islamic city, a similar synthetic definition may be helpful to understand what is the reason, and at the same the purpose, that impels the human being to be realized in a settlement.

As Petruccioli says, the idea of *Dar-Al-Islam*, “the construction of a permanent unit predestined by God”<sup>3</sup>, is independent from the particular state of each urban nucleus: its space is that of the conceptual norm, which materializes through a device of *typical* formal rules: the result is an urban agglomeration made of simple and repeated practices, “seriality and mechanisms of exclusion, typological permanence and adherence to the same linguistic code”<sup>4</sup>.

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2. BERARDI 1981.

3. PETRUCCIOLI 1985.

4. PETRUCCIOLI 1985.

Thus, if each city realizes only in that principle and in that ideal represented by the *Dar-Al-Islam*, always through the same mechanism, then each city is all the cities, since it experiences, as a sort of *monad city*, an irreconcilable and perennial contradiction among being “beset by a hostile territory”<sup>5</sup> and being, at the same time, part of the universality of the Qur’anic message.

It is primarily on that *in itself* that seems necessary to dwell: if one considers Georges Marçais’ words<sup>6</sup>, the city subsist in a familiar and collective horizon, and can not be realized as “aesthetic and political *unicum*” subject to formal and stylistic variations, such as happens in the Roman and Christian West. According to an interesting interpretation of Florindo Fusaro<sup>7</sup>, its structure has, in fact, an a-typological character, being the central void of the *dar* the recurring element, independent from any kind of functional specification (the house is built as a mosque, around the mosque. In the portion of sky visible through the patio the belonging to the Islamic nation and, at the same time, the unity of the family group are realized.

As a conceptual space of the norms, each city is *in itself* – in the original fact of being city – any city, in so far as each city is the representation of the same rules defining the *Dar-Al-Islam* as a unitary permanent construction. Yet the norm, if realized, presupposes by definition a field for its application: it is in this particular field that the city is realized as a physical entity and as urban reality, and that, as part of a territory, it obtains hierarchies and differentiations. Thus, the position of the city constitutes, against a presupposed federative norm, the main discriminating element, capable of determining each time a specific urban articulation depending on relationships and territorial situations on a scale more or less wide. This articulation, considered as the practice of a rule, is realized in a series of facts constituting the differentiated structure of the Islamic city: «The position of the Islamic city, in fact, may have been originated and developed because of its function of roads and national business hub or because of

5. PETRUCCIOLI 1985.

6. MICARA 1985.

7. FUSARO 1984.

specific physical conditions, determining an homogeneous structure. The city become each time the capital of an isolated basin (Kirman), of isolated plains or of oases linked to exceptional water resources (Damascus, Fez, Kairouan, Mecca)». <sup>8</sup> Based on a norm, the settlement rules are deployed in a morphological variety dictated by the specific territorial conditions; through the reaction with the geographic data a sequence of *typical* rules are determined, giving shape to the single urban reality and distinguishing Marrakech to Fez, Ghardaia or Djenné.

This is what has been called the “positional character of places”<sup>9</sup>: the articulation of the settlement rule diversifies the space, establishing possible relationships and, simultaneously, images and representations of meanings within which the society and its components can recognize themselves. This means not only being able to measure the geometry, the quantitative relations among the typical elements shaping the city, but also being able to value its meaning and its role in respect to what is the origins and limits of the rule.<sup>10</sup> Where different rules come into contact, it builds a limit, a solution of continuity representing the exception of those rules: if it is true that the city is in itself all the cities, it seems to be equally true that the city acquires its own consistency and its specific form in relation to the limits that defines it.

### *The City*

If, in its general characters, the Islamic city moves along this contradiction, the proximity to the desert raises an additional question, which directly refers to the construction rules of the settlement: «It is easy to indulge in the notion that one is here face to face with some deep strain of animism log since lost in the West, that these gaunt fortified villages embody some archaic and primeval myth. But rumblings on the “eternal present” are rudely interrupted when one realizes that most of the examples available to the senses are less than a century old».<sup>11</sup>

This time – i.e. the cyclic time of the daily maintenance of the

8. PETRUCCIOLI 1985.

9. SECCHI 1985.

10. SECCHI 1985.

11. CURTIS 1983.

settlement – that reshapes continuously the landscape as required by the rules of saharan environment, overlaps a time that establishes a mythical image of urban structures, and that by depriving the settlement of the historical depth of the area that the project entails, reassembles a supposed original state, primitive and untouched in its morphological characters. The permanence of the urban form, which can be related to the whole series of events that calibrates, every day, the relationship between the inhabitant and its territory, and ensure, over the time, the mechanism of self-preservation, refers, finally, to the myth of the “eternal present” which was, for a long time, the image reflecting the most of the historical representations of the city at the edge of the desert.

If – against physical constraint and distinguishing limits – the urban condition can be achieved through specific practices and modifiable rules, and if the persistence of this condition appears, on the contrary, as a mythical figure standing out of the desert, to what extent the recognition of a typical form – this is intended both as a hypothetical original moment, and as a result of recurring characters – is actually detector of the mechanisms that allow the preservation and the evolution of the settlements in the Sahara desert? On the contrary, it seems to be legitimate investigating the reasons of those modifications which, through further time lags, determine the relevance of urban form.

In this framework, when a cluster of settlements could be defined as a city? Behind every urban phenomenon, before it could be described or represented, we should imagine a pre-existing act of foundation. As noted Donnadieu<sup>12</sup>, Ghardaia, Beni Isguen, Melika, El Ateuf and the whole environment of M'zab valley, do not rise by chance: above all, the human group that is going to settle decides to refer himself to a head (*cheik*) with his group of faithful disciples (*halgat*); then, they decide where to settle, preferring areas easily defensible and high enough, so that they can find downstream, just below the aquifer, arable lands that are needed for sustenance. Immediately after have built the place of worship, the group borders the area within which it will grow and grow, for successive aggregations, the urban fabric; this operation should be intended in his double meaning, at the same time religious

12. DONNADIEU 1986.

and military. Then, the inhabitants, after having carefully evaluated possibilities limitations offered by the region, dispose a clear set of founding rules: the *mosque*, located in the highest point; the *fence*, in the center of which stands the mosque, to mark a physical and mental limit beyond which the established rules decay; the same urban fabric, as a direct result of a production system set up inside the urban *ensemble*, come true through a well-defined system of practices – almost a kind of early urban regulation – regarding orientation, maximum height (in order to avoid introspection and mutual shading, the sun being considered an inalienable right) and decoration (to not show, in any form, the difference in wealth among the inhabitants).

These facts that the inhabitant sets up to defend himself from the desert are the signs of a relationship that the settled community establishes with the surrounding environment, to be intended both as physical and as historical and geographical background. They represents the way to establish a landscape, deeply marked in its distinctive elements by the influence of the desert. These facts, transforming geographical factors and planning a new landscape, identify a typical urban form, still incredibly specific: it is on these basis that, in 1968, the dutch group Kasba 64 offers, in the contents of the review 'Forum', a detailed overview of the traditional settlements' pattern in the south-eastern Morocco; the structure of settlements, which are classified through the aid of the architectural survey in function of their configuration and organized according to a gradient of increasing complexity, from *douar* to *medina*, constitute a considerable body showing the morphological diversity induced by a complex system of relationships.<sup>13</sup>

### *Landscapes*

In 1983, the aforementioned *Type and Variation: Berber Collective Dwellings in Northwestern Sahara*, published in the first issue of "Muqarnas. An annual on Islamic Art and Architecture", is among the first questioning the need to synthesize this varied and specific reality to which we are referring. The *typical* form that William J.R. Curtis deepens throughout his study – and it appears clear starting from the

13. Kasba 64 study group 1973.

title – is, first of all, an imaginary horizon, a distillation of recurring architectural elements: the *ksar* is considered as the type able to summarize, in itself, the complexity of the habitat in the southern side of the High and Middle Atlas, between the valleys of Draa, Dades, and Ziz; Curtis outlines the structure of a hypothetical *ksar*, emphasizing its defensive role; at the same time he identifies the different functional parties, comparing the organization of the *ksar* to a kind of primitive *unité d'habitation*. In spite of his two Moroccan travels, during the spring of 1979 and 1981, and despite a long and continuous stay at the Ksar Igargar (in the surroundings of Er-Rachidia), Curtis is not trying to describe the reality as he experienced, but rather to give the feeling of a reality through an image reconstructed a posteriori: the references to the physical-geographical conditions that make the settlement possible, and those borrowed from the first studies of Cabot Briggs on the populations of the Sahara, represent just the attempt to provide attributes to a phenomenon, in order to discover its original form, and not the tool able to identify its founding reasons.

The fact that the city has been founded in coincidence with a crossroad, that it has been structured as a way station and trading caravan exchange area, that it has been built for the exploitation of an area characterized by a high concentration of resources, does not seem to affect the settlement prototype which Curtis wants to trace the origin. Opposed to an original *type* characterized by an internal functional mechanism, the founding reasons refer to a sequence of facts that, in their ritual and in their iteration, face themselves with the original substratum: the desert and its morphology. The quality of these facts (the street pattern, the height of the wall, the dimension, the position of the mosque, the shape of the plot) can be directly adapted to the morphological variety that each situation presents, or to those geographical settings characterizing the settlement rule, making it effective. Rather than focusing on typical forms, it would be more appropriate to refer to typical relations induced by the isolation condition of the desert. The isolation means, firstly, production autonomy of the settled community: upon this autonomy the whole system of values governing the construc-

tion of the urban space is realized. Paraphrasing Jean Devisse<sup>14</sup>, the city, made of earth and local materials, may extend until the inhabitants are able to derive sustenance from the surrounding physical environment. The production system is therefore a constitutive part of the founding act; it is often physically included and the settlement is already measured depending on the available resources. The progressive growth of the urban pattern, if it is adequately supported by the resources, takes place within the pre-established limits. It is thus the preventive subdivision of the space to govern the development of urban facts, according to a criterion of strict egalitarianism, which corresponds to the sharing and to the regulated distribution of the resources necessary for self-sustenance.

The absence of the monumental element, understood as an urban collective symbol, is not surprisingly, especially in a well structured habitat like this: the mosque, as testimony of the belonging of each community to the *Oumma*, the whole Islamic nation, is the transposition of the universality of the Qur'an message within the urban core, and not a sign of civil distinction. The subdivision of space and the sharing of resources finally establish a fragile balance between resources and settled population: starting from the first residential nucleus, which is directly set up following limits and physical conditions imposed by the surrounding environment, the settlement of another group of inhabitant will necessarily require the redefinition of rules and practices already established according to those conditions; the result is an autonomous and polycentric structure, a complex system of relationships between geographical conditions and human groups who make a daily effort to design their own territory. The continuous and imperceptible transformation of these relationships – the ongoing project of the Saharan landscape, defined as “flexible and plastic” – is essentially based on a construction technique.

The raw-earth construction, with its intrinsic simplicity due to the immediate availability of the base material, makes possible the formation of an ecological *ensemble* made by a series of practices and rules, continuously rewritten. In this framework, the same question of

14. DEVISSE 1983.

the permanence of the urban form may be questioned. Settled population and physical-geographical conditions are, therefore, the two terms of a broader urban discourse which materializes a landscape project built on a daily and fragile ecology: the city-oases of the north-western Sahara on one hand, and the Sahelian urban nuclei on the other, establish a very specific form of settlement that, though witnessing a very specific character, share the same condition and the same founding needs.

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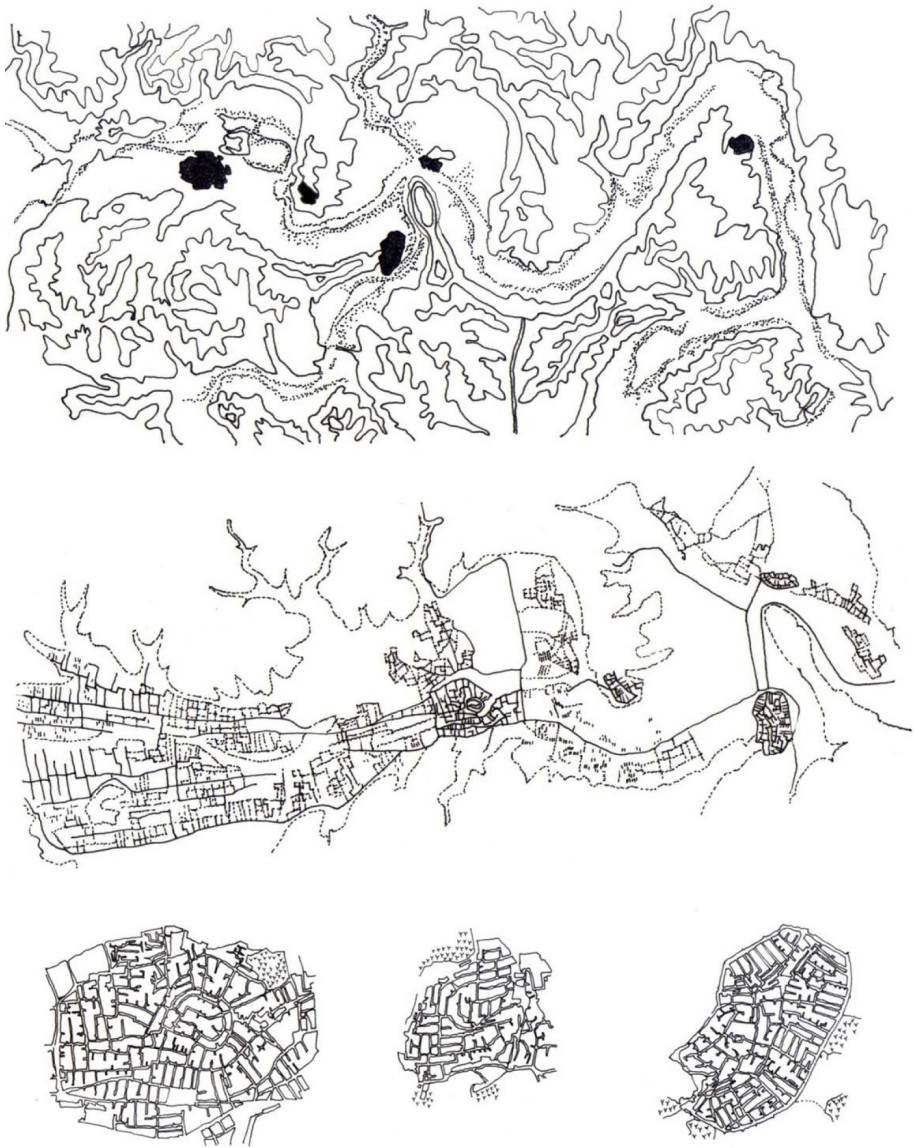
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*Fig. 1. Landscape and urban fabric in the Mzab Valley, Algeria*



*Fig. 2. Urban Fabric of Four Mauretanian Oases*



*Fig. 3. Architectural Survey of the Ksar Zenaga, Figuig, Morocco*



*Fig. 4. Landscape and settlement in Timimoun, Algeria*



*Fig. 5. Aerial View of Djenne, Mali, in the 60's*



*Fig. 6. Aerial View of Timbuktu, Mali, in the 50's*