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Old Gourna: The complexity of vernacular architecture/urbanism and cultural heritage

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Abstract

The ruins of Old Gourna in Luxor amid the Theban Necropolis evoke a lot of questions. The complexity and success of its vernacular architecture/urbanism continue to perplex experts till today. After several attempts to relocate its residents, first at Hassan Fathi's new Gourna, then in the 2nd New Gourna, Old Gourniis are still nostalgic about their old village. The main objective of this paper is to demonstrate the authentic urban/architectural particularity and cultural heritage of the Old Gourna compared to the other two New Gournas. This will be achieved via the analyses of Urban Design Dimensions in relation to the social production of urban spaces in the 3 Gournas.

Keywords: Old Gourna; Vernacular Architecture/Urbanism; Urban Desing Dimensions; Social Production of Space; New Gourna; Hassan Fathi

1. Introduction

GI	Old Gourna
GII	The New Gourna of Hassan Fathi
GIII	The second New Gourna "Al-Taref"

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1.1. The Three Gournas

Al Gourna, or Al Qurnah, is the same name used for three related villages that exist on Luxor's Left Bank, not far away from the Colossi of Memnon. The First Village or "Old Gourna" is a vernacular village that was completely designed and constructed by its inhabitants on the Theban Hill near Deir al-Bahari. More than 200 years ago, local families went to settle down amid the hills of the mountain "Al Qurn" (the horn in English). It is believed that these families were originally tomb robbers that used to sell the stolen Egyptian antiquities in the black market. Each few families, that form a tribe, used to choose an ancient Egyptian necropolis to settle down on and to build their houses. They would use the empty tombs as cellars, or as a private room for the big man of the family and his wife to sleep in when the weather is really hot; they used to call it "Bab Al Hagar" or the "Door of the Stone". Therefore, the Old Gourna contains more than one settlement or nag' as locals call them. These settlements are seven in total: Deir al-Medina, el-Assasif, el-Khokha, Al-Taref, Dra' Abu el-Naga', Gournet Marei and Sheikh Abd el-Qurna. Urban settlements that remain from Old Gourna today are considered as real traces of vernacular architecture/urbanism. The way these settlements were urbanised by its inhabitants, the architecture and the materials used in their houses are real treasures that need to be conserved.

The second village is the New Gourna of Hassan Fathi. In 1945, the great architect Hassan Fathi was accorded by the Egyptian Department of Antiquities to design a new settlement to which the inhabitants of the Old Gourna were to be relocated. The Egyptian government wanted to save the Theban Necropolis from theft and to facilitate the development of tourism. Therefore, 50 Acres of agricultural land were purchased for the operation of the new settlement: the New Gourna (World Monuments Fund, 2011). Hassan Fathi did a lot of research in the course of preparation for his design. He consulted the Old Gourniis themselves about their culture and their way of living. Hassan Fathi was also inspired by the local architecture and historical tombs in his designs. However, due to political and financial complications plus the rejection of Old Gourniis for the new site and the new architecture, New Gourna wasn't completed; only a part of Fathi's plan was realized. Out of 900 families only 130 were relocated to New Gourna (Ahmed & Elgizawi, 2009). What remain currently of Hassan Fathi's designs in the new Gourna are a couple of houses, the mosque and the market. Fathi's remained buildings also need conservation at Gourna II as concrete structures already replaced most of them.

The third village is the Second New Gourna or Gournet Al-Taref. It is a second governmental attempt in the hope of relocating Old Gourniis for the same old reason. Between 1997 and 2006, at 5 kilometres from the Old one, the second New Gourna was achieved but was also rejected by the Old Gourniis. In order to force People of Old Gourna to move to their new homes, the government demolished many houses and only few were left as evidence of a vernacular urbanism that existed one day on the hilly side. The second New Gourna contains more than 2000 houses that supposed to accommodate the 20,000 inhabitants from the seven negou' or settlements of Old Gourna. Its new urban space is of a conventional residential area where most of the services are concentrated in one neighbourhood. Depending on their socio-economic status, the Old Gourniis were offered whether to exchange their old houses for new houses in the second New Gourna or to have a piece of land in "Houd Al-Raml" on the island near the river side. This New Gourna is considered as a failure from its residents' point of view. Till today they can't adapt themselves to the idea of living in box-like houses built with concrete and facing each other. They also miss the quality of their old urban spaces and the climatic adaptability of their old houses.

1.2. Research Interest and Objectives

The urban space is a complex product of an ongoing process. It's simultaneously considered as an action of production of social urban space that implicates fully or partly the six Dimensions of Urban Design. The aim of this paper is to achieve a holistic view concerning the urbanization process of an area. It's an attempt to obtain a matrix that can elucidate the interrelationship between the Urban Design Dimensions and the Social production of Space. This is in order to reach a set of principles that will help us to understand the complexity of an urbanization process.

Our choice of Old Gourna is because of its architecture and urban spaces perplexing experts till today. The complexity of its existence and success bring to mind a lot of questions. The main objective of this research is to understand and scrutinize the convolution of vernacular architecture/urbanism as well as cultural heritage of Old

Gourna compared to the New Gourna of Hassan Fathi and the 2nd New Gourna. In order to undertake this research, the three urban settlements are to be analyzed according to a new approach that relates the Dimensions of Urban Design to the Social Production of Urban Space in the three Gournas.

2. Urban Design Dimensions vs. Social Production of Space

2.1. Urban Design Dimensions

Urban design process creates a built environment for the user. The built environment refers to everything created, manipulated, developed or modified by mankind (Bartuska & Young1994). The success of urban design process depends on six major dimensions: morphological, perceptual, sociological, visual, functional and temporal. The six dimensions of urban design are linked, as a process of problem solving, to the design operation. They stand for urban design process as an integrative and integrating activity, and as more than simply the physical or visual appearance of development (Carmona, 2003). The more the six dimensions are taken into consideration the more the produced urban space becomes successful.

2.2. Social Production of Space

In order to understand the complexity of the produced urban space in the three villages of Gourna, we believe that the theory of Social Production of the Space of Henri Lefebvre will be of a great use (Lefebvre, 1991, 2000). This theory previously helped us to understand the social production of spaces in informally urbanized area in Greater Cairo Region (Mahmoud, et al., 2014). This theory elucidates the relation between urban research and urban design process. Lefebvre analyzed the produced social space in terms of usages, practices, representations and space appropriation. Thus the produced social space is analyzed depending on three axes called the "Spatial Triads":

- Perceived Space: it is the space of everyday-life and popular action;
- Conceived Space: it is the theoretical and professional space where knowledge and genius of planners and architects appear the most;
- Lived Space: this space concerns human's lives where creativity of ordinary people has the power to imbalance and surpasses the first and second spaces

These three factors, that interact dialectically spatially rather than temporally, affect the dynamism of the production of a social urban space (Mahmoud, et al., 2014). They are the three aspects of our spatial reality: spatial practices (Perceived Space), representations of space (Conceived Space) and representational spaces (Lived Space).

2.3. Research Approach

The research aims to introduce a new method that relates Urban Design Dimensions to the Social Production of Urban Space. It traces the interdependent refraction between the production of an urban social space and the six dimensions of urban design (Fig. 1). It neither excludes certain areas nor focuses on a limited check list of urban qualities. This research doesn't judge the quality of production of the three urban spaces. There is no right or wrong urban space and it is not in our eligibility to judge. It is basically an approach that helps for a comprehensive overview, both for those requiring a general guide and those new to the subject.

We tried to analyze first the produced urban spaces in the three Gournas according to the theory of social production of space. Subsequently, we believe that in GI, where vernacular architecture is most obvious, the Lived Space dominates both the Conceived and Perceived Spaces. Nevertheless, the Conceived space is of a great quality too; we can't deny the fact that houses in Old Gourna are very well designed in order to satisfy their users' needs. In GII, the Perceived and the Conceived Spaces are of a great balance and quality; they dominate the Lived Space. Hassan Fathi did his best to achieve and to satisfy Old Gourniis. However, Fathi's Gourna was rejected by Old Gourniis due to several factors; they felt that it was too perfect to be lived in. It was like a museum space, especially

its public spaces. Finally, GIII is a governmental project where the Perceived Space overtakes both the Conceived and the Lived, yet the Conceived Space is greater than the Lived one. It is more like a generic space where housing mass-production is the most important factor and not the architectural quality nor the user.
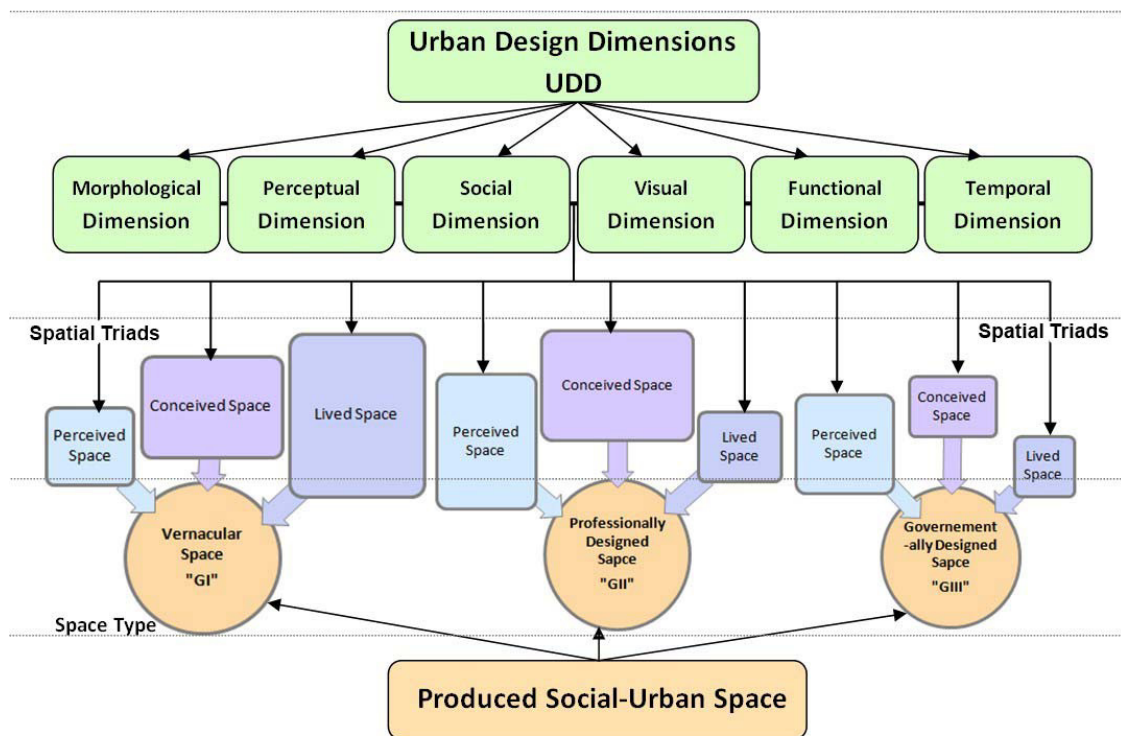.

Figure 1: Interrelation between Urban Design Dimensions and Social Production of an Urban Space (Author)

3. Research framework

3.1. Field survey

The surveying procedure aims at observing the application of the Six Urban Design Dimensions in the urban design process and thus the produced social-urban space of the three Gournas. Therefore firstly, the field survey process takes in the three Gournas as objects for research. This phase includes sites seeing and analyses, social encounter with the inhabitants and appreciating the context of the three villages. Secondly, come analyzing and testing of the spatial triads (Perceived Space, Conceived Space and Lived Space) of the produced social urban space in each of the three Gournas in relation to the six Urban Design Dimensions. Finally, we reach the research outcomes and remarks.

3.2. The three Gournas as research objects

The choice of the three villages of Gourna, as objects of research, is because of the complexity of the relationship between them (Fig. 2). Three urban settlements nearby that were produced differently in order to accommodate the same user. However, despite the uniqueness of each of them, only the one that has been produced by its user acquired the biggest success. The example of Gournas is very interesting because of the clear difference in the production of their social urban spaces. The Old Gourna "GI" is considered as a type of vernacular urbanism, a produced space in which the Lived Space prevails; whereas the new Gourna of Hassan Fathi "GII" is an example of a professionally designed urban space where the Conceived Space overtakes the two other spaces with also an important weight of social studies and surveys in the course of its conception. On the contrary, the second New

Gourna "GIII" represents the case of a top-down governmental project in which all what matters is the mass-production, and consequently an unprivileged Perceived Space dominates both the Conceived and the Lived ones.
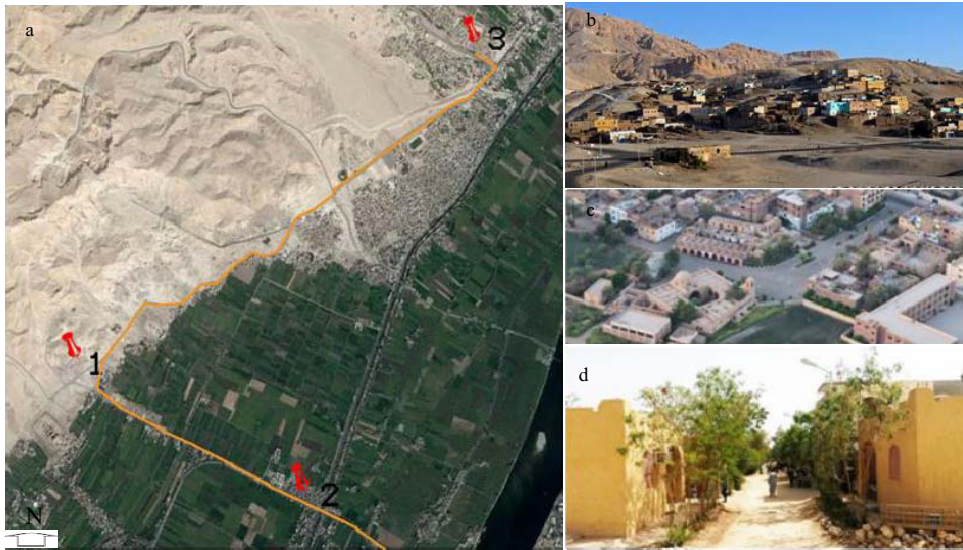

Figure 2: (a) Locations of the three villages: GI, GII, GIII (Author based on Google Earth); (b) Old Gourna (http//www.egyptos.net) ; (c) of Hassan Fathi's Gourna (UNESCO.org); (d) The Second New Gourna Al-Taref (Author)

3.3. Application on the three objects of the research

We applied our new matrix -concerning the analyses of Urban design Dimensions in relation to the produced urban space- on the produced urban spaces in the three villages of Gourna in order to trace the importance of each dimension in the existent urban/social space. Therefore, we will go through each dimension of urban design to be able to understand the complexity of the production of social urban space in each of three villages.

The first dimension is the **Morphological Dimension** which concerns the layout and the arrangement of urban form and space. Basically, it's about the morphological structure of a certain urban fabric: form and shape, land use, building blocks, plot pattern, street pattern, public space pattern cadastral and pattern permeability (Conzen, 1960). Urban morphology appreciation helps architect and designers to be aware of local pattern evolution process (Carmona, 2010).
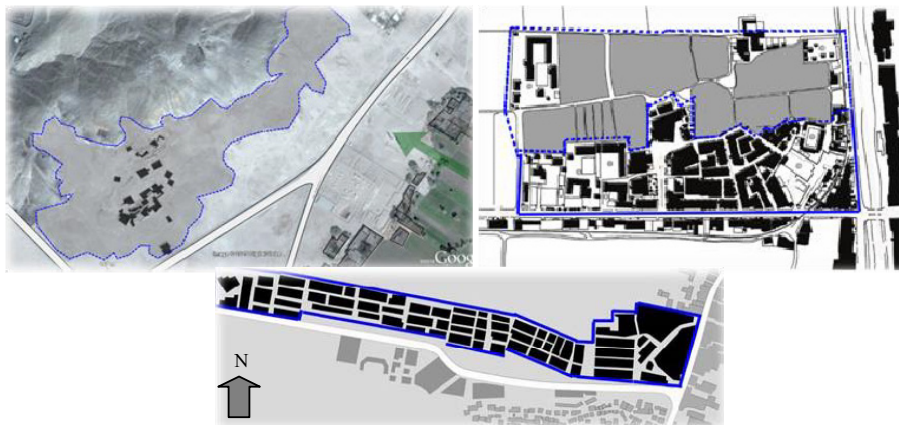

Figure 3: (a), (b), (c) Morphological structure and limits of the three villages GI, GII and GIII (Author)

The urban fabric of the three Gournas differs completely from one to another (Fig. 3 & 4). On the one hand, GI's layout appears to have been generated naturally rather than being professionally designed, building blocks varied from one family to another. The height of houses varied between one to two stories. Houses positioning follow an irregular urban pattern affected by the topography of the mountain. Building decision was also influenced by social and cultural habits of the inhabitants. Therefore, we can describe this urban fabric as an "organic" layout. On the other hand, GII's urban fabric shows more of a professional conception. Hassan Fathi tried to create main axes with focal points (Ex. the mosque). It demonstrates also bigger building blocks with a clear attempt to create intimate subspaces for the cultural privacy of the residents; it is a "semi-organic" pattern. On the contrary, GIII's layout is more "linear" with no spatial hierarchy. All building blocks are more or less of the same sizes except for the market area to the east.
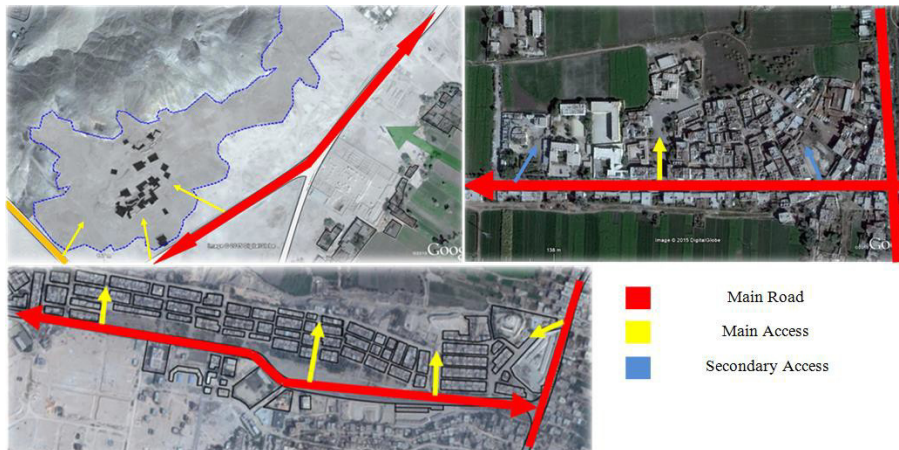

Figure 4: (a), (b) and (c) Accessibility in the three villages (Author)

Produced Urban-Social Space / UDD Urban Design Dimensions		"Vernacular Space" Gourna I			"Professionally Designed Space" Gourna II			"Generic/Governmentally Designed Space" Gourna III		
		P	C	L	P	C	L	P	C	L
1-Morphological Dimension	Land use	◉	○	●	●	●	◉	●	○	○
	Urban Form	◉	◉	●	●	●	○	●	◉	○
	Plot pattern	◉	○	●	●	●	○	●	◉	○
	Cadastral pattern	●	○	●	●	●	○	●	◉	○
	Public space pattern	●	◉	●	●	●	◉	○	○	○
	Building structure	○	●	●	●	◉	●	◉	○	○
	Permeability	X	○	X	◉	●	●	●	●	○
	Accessibility	◉	○	◉	●	●	○	●	◉	○
	Remarks	Morphological Dimension is strongly present in the Lived Space, intermediate in the Perceived and weak in the Conceived Space.			Morphological Dimension is highly taken into consideration, especially in both the Perceived and Conceived Spaces. However it needs reinforcement in the Lived Space.			Morphological Dimension is relatively thought in the Perceived space, intermediately remarked the Conceived and weakly felt in the Lived Space.		
		P: Perceived Space			C: Conceived Space			L: Lived Space		
Conflictive	X	Weak	○		Intermediate	◉		Strong	●	

Figure5: The analysis of Morphological Dimension in relation to the produced urban/social space in the three Gournas (Author)

The morphological dimension is highly taken into consideration in the Lived Space of Gourna I as the Gourniis used to study the mountain morphology prior to the construction process to achieve a layout that is mainly adapted to their values and community traditions. Moreover, buildings were mixed-use: shops and workshops used to be in the ground floors of residential houses. The urban fabric in Gourna II is very well thought in both the Perceived and the Conceived Spaces, so it reflects the genius of Hassan Fathi as an architect. As for the Lived Space, it is not as profoundly-thought as in the case of vernacular urbanism (GI). Morphological dimension in GIII is relatively taken into consideration on the Perceived Level. It reflects the governmental process of building a new settlement for residents without a minimum consideration (Fig. 5).

The second dimension is the **Perceptual Dimension**. The value of this dimension is the effect of spaces on people, of how they value, perceive, draw meaning from or add to, the built environment (Carmona, 2010). This dimension helps users to feel the reality of a place; it provides a physiological connectedness through an intellectual or emotional involvement into that environment (Fig. 6). It's the perception of the user that gives a sense to the place even if it is invented reinvented by urban designers with variable degrees of fitness. Consequently, depending on people's experience in a certain place, its authenticity and quality are determined.

Figure 6: (a), (b) and (c) Vernacular drawings in Old Gourna (http//www.egyptos.net); (c) Hand prints in an Old Gourna House (Author); (d) Wooden door ornaments in Old Gourna (Author); (e), (f) and (g) Connectedness of Old Gourniis (residents of New Gourna GIII) to their new environment (Author).

In this dimension we undertake also concepts of globalization and mass culture. As we will see, globalization, and standardization as in GIII, homogenization as in GII, led to a sense of "Placelessness" where the user can't really sense the place and thus a loss of local culture (Relph, 1976; Crang, 1998). This clarifies the strong unexplained attachment of Gourniis to GI. The perception of Old Gourniis vis-à-vis the three villages was and will never be the same.

In Old Gourna the perceptual dimension is very strong (Fig. 7). The place identity is unmistakable. Old Gourniis are very much connected to their environment. They act and interact with their urban space in a unique way. In Old Gourna's houses, for example, you can find wall openings so pigeons can fly easily inside the house. Colors have meaning and vernacular drawings differ from other drawings you might see in other places. In Fathi's New Gourna, the perceptual dimension is strongly taken into consideration especially in the Perceived and Conceived Spaces.

Produced Urban-Social Space / UDD Urban Design Dimensions		"Vernacular Space" Gourna I			"Professionally Designed Space" Gourna II			"Generic/Governmentally Designed Space" Gourna III		
		P	C	L	P	C	L	P	C	L
2-Perceptual Dimension	Environmental percep.	●	●	●	●	●	X	X	X	X
	Environmental meaning and symbolism	●	●	●	●	●	○	○	○	○
	Sense of Place	●	●	●	●	●	○	○	○	○
	Territoriality/Behavior	●	●	●	●	●	○	○	○	○
	Personalization	●	●	●	●	●	○	◉	○	○
	Place Identity	●	●	●	●	●	○	○	○	○
	Globalization	◉	○	◉	●	●	◉	●	●	◉
	Mass Culture	○	○	○	◉	●	◉	●	●	◉
	Territorial detachment	○	○	○	◉	○	○	●	●	●
	Remarks	Perceptual Dimension is balanced all Spaces: Perceived, Conceived and Lived. GI has a very strong palace identity.			Perceptual Dimension is obviously balanced through the Perceived and Conceived Spaces. However, it is weakly felt in the Lived Space.			Perceptual Dimension is generally weakly taken into consideration in, apart from in Globalization, Mass Culture and Territorial Detachment which conducts negative feeling.		
		P: Perceived Space			C: Conceived Space			L: Lived Space		
Conflictive	X	Weak		○	Intermediate		◉	Strong		●

Figure 7: Analysis of Perceptual Dimension in the three villages of Gourna

However, in the Lived Space it is weakly felt, especially at the beginning. Now people try to change their environment by adding to their new building things they kept from Old Gourna. For example: they reuse their olddoors or benches to make them feel like home (Fig. 8). In GIII, this dimension is weakly interpreted. Therefore, Old Gourniis are changing the space. We believe that this urban space will be perceived differently in few years, as People are trying to adapt it to their physical and emotional needs.

Figure 8: (a) Door at GI, (b) and (c) Doors from Old Gourna at GI, GII (Author)

The third dimension is the **Social Dimension** which concerns mainly understanding the relationship between People, their society and environmental space. So, it concerns mainly society and space with reference to public-realm, sense of neighborhood, safety and security (Fig. 9). The process of inventing urban spaces for societies is a complex ongoing procedure, by which users constantly create and modify their own urban spaces and simultaneously are influenced by these spaces.

The importance of this dimension is due its deep influence on the human behavior. As the user affects his spatial environment, his space influences and reshapes him physically and physiologically. In vernacular urbanism as in GI this dimension is very strongly taken into consideration as in the proverb "no one will scratch your back as you do". People of Old Gourna were very well aware of their social and spatial needs. They were also conscious about their environmental "Probabilism and Possibilism" (Porteous, 1977; Bell et al., 1990). So in fact while the vernacular architecture appears very authentic because it comes from the People and for the People, professionally designed urban spaces can be considered as a manipulation of environmental probabilities (Gans, 1968). Residents of Old Gourna stress also on the lack of sense of security that they used to have over the mountain. They have the feeling of being exposed in Gourna II & III.

Figure 9: (a) Public spaces in GI (http://www.tripadvisor.com/), (b) Private space in Old Gourna (Author)

Produced Urban-Social Space	"Vernacular Space" Gourna I			"Professionally Designed Space" Gourna II			"Generic/Governmentally Designed Space" Gourna III		
UDD Urban Design Dimensions	P	C	L	P	C	L	P	C	L
Space and Society	●	●	●	●	●	◉	○	○	X
Cultural Heritage	●	●	●	◉	●	○	X	X	X
Physiological needs	◉	○	●	●	●	○	●	◉	○
Safety and Security	◉	◉	●	◉	◉	○	◉	◉	○
Affiliation needs	●	◉	●	●	●	○	◉	◉	○
Esteem needs	○	●	●	●	●	○	X	X	X
Self-actualization	●	●	●	●	●	○	X	X	○
Cognitive needs	◉	◉	●	◉	●	◉	◉	◉	○
Aesthetic needs	○	◉	●	●	●	◉	○	○	X
Public Realm	◉	◉	●	●	●	◉	◉	○	◉
Remarks	Social Dimension is complexly existent in Gourna I. However it's strongerly taken into consideration in both the Lived and Conceived Spaces.			The Social Dimension is strongly taken into consideration especially in the Perceived and Conceived Spaces. However it is more likely unsuccessful concerning the Lived Space.			The Social Dimension is generally weakly interpreted in Gourna III. A large number of conflictive relationships appear especially in the Lived Space.		
	P: Perceived Space			C: Conceived Space			L: Lived Space		
Conflictive	X	Weak	○	Intermediate	◉	Strong	●		

Figure 10: Social Dimension in produced urban spaces of the three villages (Author)

Social Dimension is highly taken into consideration in Old Gourna (Fig. 10). People are well aware of their space and society. Cultural habits are controlling the space. Houses are mostly introvert except for those who have another main terrace to enjoy the view from above. The sense of security is also high because of living on the mountain. People of Old Gourna say that you have to be an Old Gournii to be able to move or circulate there. In Fathi's New Gourna social dimension is well studied in both the Perceived and Conceived spaces. Hassan Fathi studied for a long time the social culture and habits of Old Gourniis as well as their needs before putting his concepts. He tried to provide the maximum activities in one place. Therefore, there are the mosque, the school and the market. However it's intermediately realize in the Lived Space. Old Gourniis who live in Fathi's Gourna lack the sense of security because they got down from the mountain and feel exposed. We believe that it's not Fathi's fault as he didn't get to choose the land for his project. In the second New Gourna, this dimension is weakly interpreted, sometimes it is even conflictive. People can't accept living while facing each other, for them intimacy is lost in the New Gourna.

The fourth dimension is the **Visual Dimension** (Fig. 11). Basically this dimension concerns the visual aesthetic aspect in the urban design/spatial production of a certain space. It includes both the aesthetic qualities and appreciation of a certain place. The visual appreciation is considered as a product of a cognitive and perceptive process.

Essentially, it is how we are stimulated environmentally, how we perceive and interpret all the gathered information till we receive it mentally and emotionally, like in the case of urban architecture (Fig. 12).

Produced Urban-Social Space / UDD Urban Design Dimensions	"Vernacular Space" Gourna I			"Professionally Designed Space" Gourna II			"Generic/Governmentally Designed Space" Gourna III		
	P	C	L	P	C	L	P	C	L
Aesthetic Preferences	◑	◑	●	●	●	◑	◑	○	○
Aesthetic Order	○	○	●	●	●	◑	◑	○	○
Openness	●	●	◑	◑	◑	○	○	○	○
Historical Significance	●	●	●	◑	●	○	◑	◑	○
Proximity	●	●	●	●	●	○	◑	◑	○
Common Enclosure	●	●	●	◑	●	○	○	○	○
Orientation	●	●	●	●	●	○	○	◑	○
Closure	◑	●	●	●	●	◑	○	○	○
Urban Space	◑	◑	●	●	●	◑	○	○	○
Architecture	◑	●	●	●	●	◑	○	○	○
Remarks	According to former inhabitants of Gourna I, Visual Dimension is irraplacebale. It is strongly taken into consideration in the three Spaces.			Visual Dimension in Gourna II is very successful on both the Conceived and the Perceived levels. Shortly after its realization, it could have been considered as a Museum Space. However it was rejected by Users due to Weakness in the Lived Space.			Visual Dimension is Extremely weak in Gourna III. There is no uniqueness in the Urban Space. It was also and still is rejected by Users.		
	P: Perceived Space			C: Conceived Space			L: Lived Space		

Conflictive	X	Weak	○	Intermediate	◑	Strong	●

(Left side vertical label: **4-Visual Dimension**)

Figure 11: Visual Dimension in the produced spaces of Gourna villages

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Figure12: (a), (b), (c) Urban Architecture in GI, GII and GII (Author)

The consideration of this dimension in the urban design process differs from one individual to another depending on several variants such as cultural and social heritage. Maybe this is why visual preference or satisfaction cannot be acquired by Old Gourniis in another space but the Old Gourna's. It is the way they see their Old village and the feeling they have when they are on the top of the mountain Al Qurn. In Gourna II visual dimension is very successful in both the Perceived and the Conceived Spaces. User has the impression of being in an aesthetically too perfect urban space, like living in a museum (Fig. 13).

Figure 13: (a), (b), Aesthetic Dimension in the Perceived and Conceived Spaces of Gourna II (http://whc.unesco.org/, http://architectureindevelopment.org/)

The fifth dimension is the **Functional Dimension.** This dimension concerns the functionality of urban spaces, how they work and how urban designer can make better places (Carmona, 2003). The function of a certain space depends in a big part of how it can satisfy certain needs for the user. Needs may be physiological, social, economical, emotional or psychological. So basically, this dimension concerns mainly movement, comfort, engagement privacy and density of the urban space (Fig 14 & 15).

Figure 14: Urban fabric Housing and Activities in Gourna II (Author)

Figure 15: Urban fabric Housing and Activities in Gourna III (Author)

		"Vernacular Space" Gourna I			"Professionally Designed Space" Gourna II			"Generic/Governmentally Designed Space" Gourna III		
Produced Urban-Social Space UDD Urban Design Dimensions		P	C	L	P	C	L	P	C	L
5–Functional Dimension	Visual permeability	○	◉	●	◉	●	◉	◉	◉	○
	Comfort	○	○	●	●	●	○	◉	●	○
	Active Engagement	◉	◉	●	●	●	○	◉	◉	○
	Passive Engagement	◉	●	●	●	●	○	○	○	○
	Movement	○	○	●	●	●	●	◉	◉	○
	Mixed Uses & Density	◉	◉	●	●	●	●	○	◉	◉
	Privacy	●	●	●	●	●	◉	○	○	○
	Visual Privacy	●	●	●	●	●	●	◉	○	○
	Environmental Design	●	●	●	●	●	◉	○	○	○
	Remarks	The Functionl Dimension is Very strong in the Lived Space. However it is not questionable in bothe the Perceived and Conceived Spaces.			Gourna II is quite successful on the functional level. Especially in the Perceived and Conceived Spaces, yet it is a bit questionable in the Lived Space.			Fictional Dimension is weakly interpreted Gouma III. Residents count only electricity and water as the only extra privileges they have got there.		
		P: Perceived Space			C: Conceived Space			L: Lived Space		
Conflictive	X	Weak	○		Intermediate	◉		Strong	●	

Figure 16: Function dimension in the urban space of GI, GII and GIII (Author)

The functional dimension is most successful in Gourn II as it was designed to function efficiently, especially on both the Perceived and the Conceived spaces (Fig. 16). So inhabitants were given water, electricity and well designed streets. However, concerning the Lived Space Old Gourniis were very sensitive to their own environmental

design, their visual and aural privacy. Consequently, this functional well designed space was rejected by users. In Old Gourna, vernacular urbanism/architecture satisfied a big part of the user's needs. People were suffering from lack of water and electricity but the location was much more important to them (Fig. 17). One of the Old Gournii was expressing his feeling of owning the whole world just by looking from his window: "*What else could I want as I have whole Luxor and Karnak underneath? This is my view, what do I have in the other villages that can replace this?*"

Figure 17: (a), (b) & (c) The View from houses of Old Gourna (Author)

It is true that residents of GIII now has water and electricity but they are missing their mud houses in which temperature were adapted to humans without air conditions. In Gourna II however, this problem was resolved as Hassan Fathi insisted to construct with materials that resemble to the old ones used by old villagers. Nevertheless, unfortunately, houses in GII didn't last for long as they were built without foundations and with other techniques. Consequently, houses started to rupture seriously and many of them fell down. Some residents tried to save buildings by re-adaptation and repairing, others preferred to demolish their "Fathi" houses. Accordingly, today GII is a mixture of Fathi's designs and concrete buildings that replaced mud houses.

Figure 18: (a), (B), (c), (d), (e) & (f) Concrete houses in the New Gourna of Hassan Fathi and re-adaptation the in GIII (Author)

The **sixth** and last **dimension** is the **Temporal Dimension** (Fig. 19). Inventing or reinventing urban spaces is like working in four dimensions and not three. The fourth dimension is being time (Carmona, 2003). As time passes both the Perceived and the Conceived Spaces are highly affected by the Lived Space. Therefore, produced social urban spaces are in fact the result of layers' accumulation over many years. For that reason the most successful urban space is the one that was designed while taking into consideration the temporal factor, and actually we can consider it as a real indication of how much this space is sustainable.

	Produced Urban-Social Space	"Vernacular Space" Gourna I			"Professionally Designed Space" Gourna II			"Generic/Governmentally Designed Space" Gourna III		
UDD Urban Design Dimensions		P	C	L	P	C	L	P	C	L
6-Temporal Dimension	Time Cycle	○	●	●	○	◉	◉	X	●	X
	Conservation	○	◉	●	◉	◉	○	◉	◉	○
	Continuity of Place	●	◉	●	◉	◉	◉	◉	●	○
	Obsolescence	○	●	●	●	◉	○	○	◉	○
	Resilience - Robustness	◉	◉	●	●	◉	○	○	◉	○
	Remarks	The Temporal Dimension is very strong in the Lived Space. In addition, it is persistent in the Conceived sapce contrarely to the Perceived Space that needs conservation .			Temporal Dimension was intermediately taken into consideration in Gourna II. This is why its urban space is constantly changing. It needs conservation.			Temporal Dimension is moderately taken into consideration in Gourna III, especially in the Conceived Space due to the usage of concrete. However, we expect a change in both the Perceived and the Lived spaces.		
		P: Perceived Space			C: Conceived Space			L: Lived Space		
Conflictive	X	Weak	○		Intermediate	◉		Strong	●	

Figure 19: Temporal dimension in the urban spaces of the three villages (Author)

The temporal dimension is very strong in the Lived Space of GI as time hasn't changed the way its residents live. Moreover, it's also considerable in its Conceived space. Houses were keeping their state of origin till they were demolished by the government. So now there is a kind of degradation on the Perceived level as the village is nearly deserted, only 15 families resisted and stayed over the mountain. The relation between temporal dimension and produced space in Gourna II is relatively intermediate. In few years its urban space won't be the same as concrete buildings are replacing mud houses (Conceived Space) and hence the Living Space will change accordingly. As for Gourna III, we believe that temporal dimension was taken into consideration only in its Conceived Space as houses are built with bricks and concrete. However, its Perceived and Lived Spaces will change drastically as residents already started to add extra spaces to their houses. We believe that this change is due to the incoherence between the box-like 2 bedrooms designed houses (Conceived Space) and the cultural social habits (Lived Space) of Old Gourniis.

3.4. Research outcomes and remarks

The six dimensions are strongly uniquely interpreted in the Lived Space of Old Gourna. Even without an architect the Conceived Space meets users' expectations. The Perceived Space reflects a strong identity of the place that however might be conflictive with others' point of view, especially architects and urban planners. Open spaces are multiuse areas. Residents used to live in their open spaces whether it is inside or outside the houses. Spaces in front of the houses were used as terraces and sitting area over the breathtaking view of Luxor, while spaces inside the houses were used to live and raise their domestic animal in open air. Constructing houses on the leveled mountain give residents privacy inside and outside houses.

On the contrary of the Old Gourna, in the New Gourna of Hassan Fathi the urban design dimensions are strongly implemented in both the Perceived and Conceived spaces, whereas the Lived Space lacks to some extent the existence of these dimensions. Therefore at the beginning we had the feeling that Fathi's Gourna was a deserted museum. Today, the Lived Space seems to be detached more and more from residents' social culture. Spaces are not flexible so residents preferred to replace Old mud houses by concrete one while trying to adapt them to their culture. Unfortunately, there are some unsuccessful attempts. For example: nowadays animals are raised inside concrete building that replaced Fathi's designed houses (Fig. 20).

In the Second New Gourna, urban design dimensions are weakly interpreted in the spatial triads. The urban space of GIII has ultimately wiped away a vernacular urbanism/architecture as it doesn't leave any space for residents to act. People are very limited by the ordinary design accorded to their houses. Their only salvation is to elevate houses to meet their needs. Moreover, the used materials in these houses are completely strangers to the environment. They obliged people to add air-conditions everywhere; they are utterly against sustainably principles.

Figure 20: (a) Domestic animals in Old Gourna; (b) Cows in a concrete building in Fathi's Gourna; (c) Poultry in the backyard of GIII (Author)

4. Conclusion

One might think that the community Old Gourna is like any other community of a southern Egyptian village. Nevertheless, the complexity of the production of its space, where life is entwined with death, resides in the fact of its uniqueness. In this place, life aroused from ancient tombs as an evidence of vernacular geniuses. This place is rich with vernacular architectural and urban solutions. It elucidates numerous mysteries of cultural heritage. Thus, it needs to be conserved!

Urban design dimensions, morphological, perceptual, social, visual, functional and temporal are key areas for a successful urban design process. Relating these dimensions to the spatial triads "the theory of social production of space" helped us to understand the relevance of each of these dimensions in the produced urban spaces of the three villages of Gourna. Moreover, this relation clarifies some of the complexity of the creation and the subsistence of a vernacular architecture/urbanism of an important cultural heritage like Old Gourna. The production of space in Old Gourna is the secretion of the Old Gournian community in this specific place. The Change of any of the components of this production process will lead to other results. This is one of the main reasons that led to the lack of success of the other two Gournas. Consequently, Old Gourna may be considered as a complex unique vernacular community that needs to be conserved for future education.

The New Gourna of Hassan Fathi was an evidence of his architectural genius. However, in the beginning it was too perfect for Old Gourniis to live in. There was no space form them to act and animate their Lived Space. Consequently, Old Gourniis felt socially detached from their living environment. Today, those who live in the Second New Gourna appreciate the usage of mud bricks, but suspect the durability of buildings in Fathi's. When buildings of mud bricks started to fall down, they chose to replace them with concrete structures because it's more durable and they can have several stories instead of one or two.

The second New Gourna, where concrete prevails, diverts from people needs. It is the example of a top-down office prepared project that deals superficially with user's needs. Therefore, Old Gourniis feel exiled in this place. It affects negatively their traditions and vernacular culture. The research also shed light on the need to treat this kind of problems differently. People need to be assisted professionally, but in a sensitive way that helps them to find appropriate solutions that work the best for them.

As the two New Gournas conflict ultimately with Old Gourniis cultural and social needs, the Old Gourna will remain a legend of vernacular architectural/urbanism and cultural heritage. Based on that, this research draws attention to the urgent need of its conservation.

References

World Monument Fund, 2011, *New Gourna Village Conservation*, New York, 101 P.

Ahmed, K.G., Elgizawi L., 2009, *Two Versions of "New Gourna" and the dilemma of sustainability in new urban communities* in: Egypt in "Sustainable Development and Planning IV", Volume 2, WIT Press, pp. 691-701

Bartuska, T. & Young, G., 1994, "*The Built Environment Definition and Scope*" in The Built Environment: A Creative Inquiry into Design and Planning, Crisp Publications, Inc., 14 P.

Carmona, M., 2003, *Public Places, Urban Spaces: The Dimensions of Urban Design*, Architectural Press, Oxford, 322 P.

Henri, L.,1991, *The Production of space*, translated by Donald Nicholson-Smith, Black Well Publishing, Oxford, 434 P.

Henri, L., 2000, *La Production de l'Espace*, Économica Édition, Paris, 512 P.

Mahmoud, R., A., Abd Elrahman, A., S., 2014, *Social Production of Urban Spaces in Informal Areas*, in: © ARCHCAIRO 2014: Responsive Urbanism in Informal Areas, Towards a Regional Agenda for Habitat III, 16 P.

Conzen, M., R., G., (1960), Alnwick, Northumberland, *A study in town plan analysis*, IBG Morph no. 27, London, Institute of British Geographers. pp. 1-121.

Carmona, M., 2010, *Urban Design Reader*, Architectural Press- Elsevier, Oxford, 384 P.

Relph, E., 1976, *Place and Placelessness*, Pion, Academic Press, London, 156 P.

Crang, M., 1998, *Cultural Geography*, Series: Routledge Contemporary Human Geography, 1st Edition, 224 P.

Porteous, L., (1977), *Environment and Behaviour Reading: Planning and Everyday Urban Life*, Addison-Wesley, London.

Bell, P.A., Fisher, J . D., Baum, A. and Greene, T.C., 1 990, *Environmental Psychology*, 3rd Edition, Holt, Rinehart & Winston, Inc., New York.

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http://www.tripadvisor.com/