

# The Restructuring of Socio-Economic Relations during the LPPNB\* in the Southern Levant and the Role of Ritual Buildings

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## Abstract

The Neolithic period in the southern Levant brought about fundamental changes in socioeconomic practices that were mediated through transformations in social organization as well as in ritual behaviours. Based on new archaeological data that span the two major periods of the Aceramic Neolithic – PPNA and PPNB – our understanding of these transformations has increased. In this paper we will focus on highlighting the role and function of ritual buildings in restructuring the new economic and social relations that characterized LPPNB societies in the southern Levant. We propose a model that focuses on the causal relationship between the transformations in social and ritual practices and agricultural land – the principal economic base of those societies – and the impact of population growth and aggregation on those changes.

**Keywords:** Southern Levant, LPPNB, Population Aggregation, Ritual Transformations, Ritual Buildings.

## Introduction

Recent excavations in the Levant have increased our understanding of different cultural facets of Neolithic societies. These excavations help us to understand the nature of the transition from hunting and gathering to farming societies and the transformation processes that tackled the social and ideological realms of Neolithic societies during this transitional phase. In the early stage of this period – the PPNA – sedentary villages were established that extended from the southern to the northern Levant. No evidence has been found to suggest new economic practices focused on farming or animal domestication. However, the long occupation at one site during the PPNA period is thought to have caused changes in the social structure of the

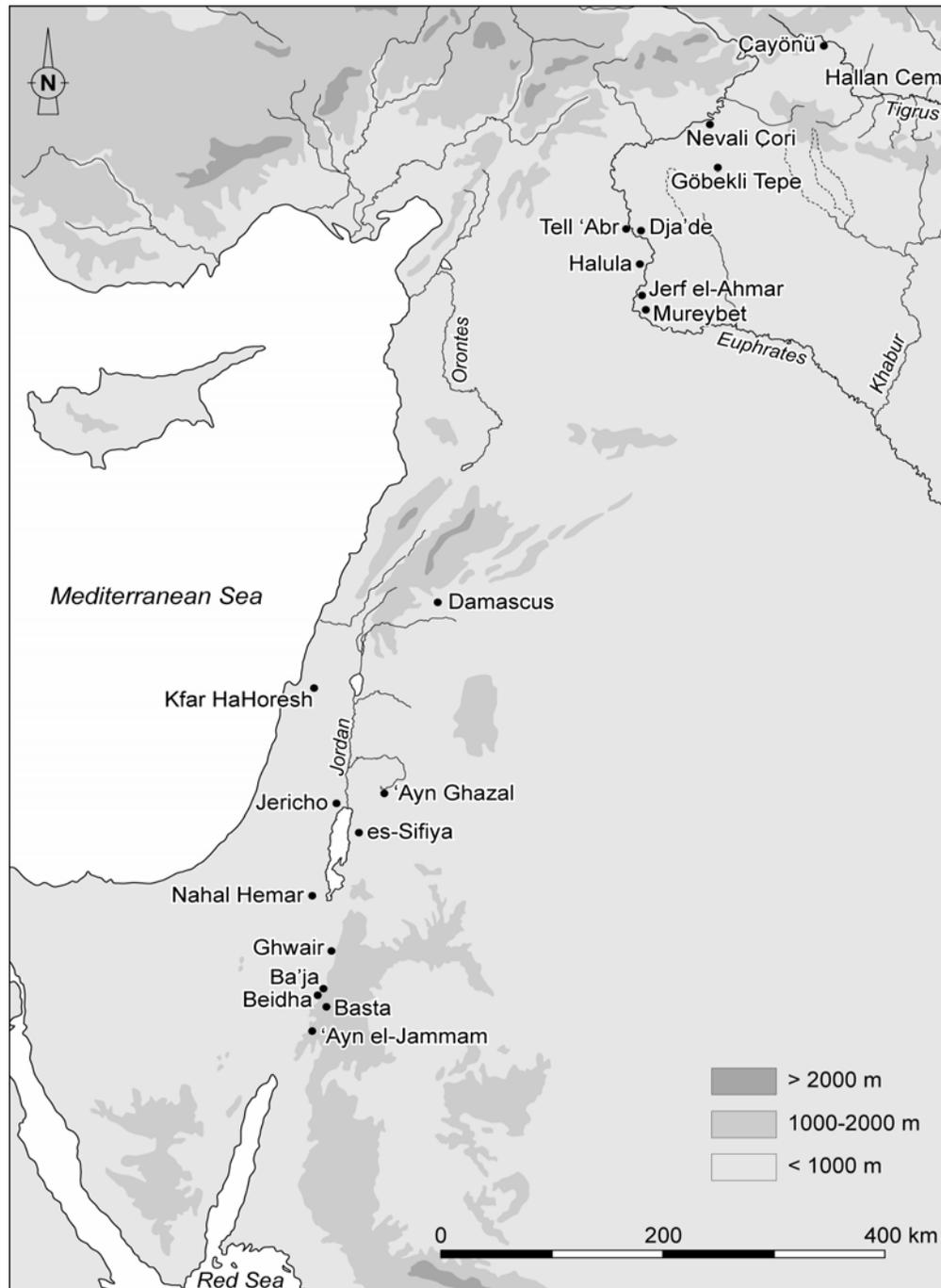
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\* LPPNB is the abbreviation for Late Pre-Pottery Neolithic B.

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societies (BYRD 2005b; BENZ 2000; GEBEL 2002), and the mechanism by which they regulated their relations. Those aspects have been observed in numerous excavated ritual buildings at sites such as Jericho (KENYON 1957), Mureybêt, Jerf al Ahmar (STORDEUR *et al.* 2000), and Tell 'Abr (YARTAH 2005) just to mention a few (Fig. 1).



**Fig. 1:** map showing the location of main sites mentioned in the text.

Fundamental cultural changes have been documented at the onset of the PPNB period. Most important is the change in economic practices in which animals and plants were domesticated. The causes of this economic change have been explained differently. For some, social or religious factors are proposed (BENDER 1978; CAUVIN 1976, 2000), while for others the demands of ritual feasting caused the need for more surplus production and consequently the change to plant domestication (HAYDEN 1992). While M. Benz (BENZ 2006: 455-457) proposed that communal feasts did not cause the transition to a productive economy, they were effective media for promoting new social norms to replace traditional behavior patterns such as general reciprocity. Hence communal feasts were a means to stabilize intra-group alliances. One should also recall the proposition that population pressure was the cause of the changing economic practices, e.g. the domestication of plants and then animals.

Besides the above economic changes, the PPNB period in the Levant witnessed changes in site sizes (ROLLEFSON 1998a; SIMMONS 2007). Many sites dated to the LPPNB exceeded 10 ha in size, compared with a maximum of 5 ha during the MPPNB and 3 ha in the PPNA. That changing pattern in settlement size has been correlated with population growth and aggregation that reached its high point during the LPPNB (ROLLEFSON 1989; SIMMONS 2007; KUIJT 2000b). Scholars have suggested that there was a transformation in the ideological structure of the PPNB to cope with that demographic situation and to mediate social relations and interaction at the intra-community scale, and a variety of archaeological evidence, such as ritual buildings, figurines and statues, mortuary practices and feasting, have been examined to understand the nature and causes of the ritual behaviors of the PPNB (CAUVIN 1994; GEBEL, HERMANSEN and JENSEN 2002; VERHOEVEN 2002a and b; KUIJT 2000a; ROLLEFSON 1998b, 2000; SCHMIDT 2005; TWISS 2008). Furthermore, the concept of a feast has been studied to correlate it with the outset of agriculture societies. It has been proposed that ritual behaviors functioned to maintain egalitarian ideology inside the farming societies and to reduce tension in times of environmental stress (ROLLEFSON 1998b; VERHOEVEN 2002a). For others, based on an examination of mortuary practices, ritual behaviors were a means to gain authority inside the farming societies (KUIJT 2002). Moreover, feasts have been suggested as a means to reduce

communal tension and as a way for personal gain (TWISS 2008: 437).

In this paper I will focus on the expanding role and function of ritual buildings for mediating between the new economic and social organizations that characterized the LPPNB societies in the southern Levant. My aim is to propose a model that encompasses the transformation in social and ritual practices to cope with the new economic capital – agricultural land – as well as population growth and aggregation, and how that might be reflected in ritual building styles, and the messages those building might convey. Moreover, we will not merely focus on ritual buildings themselves but also try to correlate them spatially with other buildings and features that might help in explaining their cultural role.

For the sake of clarity, the two main periods that preceded the LPPNB will be presented: the Pre-Pottery Neolithic A (PPNA), and the Middle Pre-Pottery Neolithic B (MPPNB).

### **I. Terminology and identification of ritual buildings**

In the archaeological literature, terms such as ‘shrine’ and ‘temple’ are sometimes implicitly used to denote the function of those buildings that are different from the utilitarian or domestic ones at the site. In the case of prehistoric archaeological sites, several criteria were used to segregate those buildings that might have a ritual function. They include:

- 1- the style of building, usually different from domestic buildings
- 2- the associated features and objects,
- 3- the energy expended in its construction,
- 4- the spatial location and segregation, etc. (BYRD 1994; ROLLEFSON 1998b).

Interestingly, not all examples of ritual buildings in the Near East share the same criteria for their functional categorization. The uses of style of buildings, and the spatial segregation of the buildings, for example, have been employed to differentiate between standard domestic buildings and ones that might have a ritual function. The excavations at the sites of ‘Ayn Ghazal and Beidha in Jordan, for example, produced several patterns of architectural styles that are generally different in type, size and associated features from the standard domestic buildings. In other cases, the style of construction cannot always be employed to identify functional differentiation, especially when the buildings share in common the plan of household structures. In

this case, other criteria have been employed by archaeologists to infer the proper ritual or symbolic function of the buildings. Those include the absence of material culture indicating domestic activities, but the presence of ones hinting at symbolic meaning, such as human crania or / and animal skulls (FINO 2004; WATKINS 1990: 344).

Prehistoric archaeologists have expanded their interests to include criteria that can help identify so-called temples and shrines. The size of the buildings sometimes has been used to identify such differences (ROLLEFSON 1998b 2005: 10). Shrines were smaller because they might have been used by smaller groups (lineages), while temples were larger and more complex and might have served the entire community (ROLLEFSON personal communication). Both buildings denote a place or a spatial context where ritual practices were conducted. This means that it is the place, as a physical unit, that is significant, and the main task is to find out what cultural manifestations that place played in the prehistoric societies. The focus on a place is more significant because it avoids unlimited speculation on the kinds of rituals that were carried out there. It is not the rituals and to whom they were directed that is of special interest here, but how that physical unit became symbolic, the message it conveyed and what cultural functions or roles it played.

## **II. Periodization of ritual buildings**

Thanks to the intensive archaeological research in the Levant, we now have a better understanding of the culture history of this supra-region. Based on her excavations at Jericho, K. Kenyon (KENYON 1957) identified two sub-periods of the early Neolithic: the Pre-Pottery Neolithic A and B (PPNA, PPNB). The PPN has since been subdivided into four phases incorporating a time span of *ca.* 3400 years (Table 1). For a long time, Jericho stood as a unique PPNA site in terms of its tower and wall, but recent excavations in the southern Levant and in the middle Euphrates region have improved our understanding of the cultural characterization of this sub-period (CAUVIN and Cauvin 1993; AKKERMANS and SCHWARZ 2003), on the one hand, and of the cultural differences between the northern and southern part of the Levant, especially in terms of construction of communal buildings, on the other.

Such distinctions have been found in the public buildings excavated at Jerf el-Ahmar (STORDEUR *et al.* 2000), Mureybet House 47 (CAUVIN 2000) and Tell 'Abr

(YARTAH 2004, 2005) (Fig. 1). Farther north, ritual buildings were also excavated at sites such as Hallan Çemi (ROSENBERG 1999) and Göbekli Tepe (SCHMIDT 2005).

**Table 1: Chronology of the Neolithic in the Southern Levant (After TWISS 2007: table 1).**

<b>Period</b>	<b>Radiocarbon BP</b>	<b>Calibrated BP</b>	<b>BC</b>
<b>PPNA</b>	10,200-9,400	11,700-10,500	9,700-8,500
<b>EPPNB</b>	9,500-9,300	10,500-10,100	8,500-8,100
<b>MPPNB</b>	9,300-8,300	10,100-9,250	8,100-7,250
<b>LPPNB</b>	8,300-7,900	9,250-8,700	7,250-6,700
<b>PPNC</b>	7,900-7,500	8,600-8,250	6,600-6,250

Our information about ritual buildings during the Early Pre-Pottery Neolithic B (EPPNB) is scarce. This phase is not well identified in the southern Levant, and there is debate on its presence (but see the recent excavations at Motza in KHALAILY *et al* 2007). However, the case in the Middle Euphrates region is different. Ritual buildings might be restricted to the site of Dja'de el-Mughara. The so-called "House of the Dead" at the site has been seen as representing a communal burial place with 38 interments (COQUEUGNIOT 1999). Çayönü in southeast Turkey can be considered to date to this period with a communal burial building (Skull Building) and the rectangular ritual building called the Terrazzo Building (ÖZDOGAN 1999).

Our information on ritual buildings increases with the beginning of the Middle PPNB and Late PPNB. In the southern Levant these structures have been found at MPPNB Jericho (KENYON 1957), Beidha (BYRD 1994; KIRKBRIDE 1968) and Ghwair I (SIMMONS and NAJJAR 1999). Furthermore, the site of Kfar HaHoresh is a special case, since it represents a mortuary place with the absence of domestic buildings (GORING-MORRIS *et al.* 1998).

During the LPPNB the best examples of ritual buildings in the southern Levant came from 'Ayn Ghazal (ROLLEFSON and KAFAFI 1997) and Beidha. Farther to the north, such buildings were found at Çayönü (ÖZDOGAN AND ÖZDOGAN 1989).

### III. Characteristics of ritual buildings

In the above section I tried to survey the chronological and, to some extent, the spatial distribution of ritual buildings in the Levant. My aim was to present the chronological context in which such buildings were found, and which had a historical meaning inside the societies. In the following, I will try to describe the physical characteristics of those buildings and their spatial correlations with other features or buildings. This step will enable us to classify the ritual buildings on the one hand, and to trace their physical changes and characterizations on the other hand. For purposes of clarity, the characteristics of some PPNA and MPPNB ritual buildings will be presented first.

#### III. 1 PPNA ritual buildings

Starting with the PPNA in the southern Levant, the best example of communal buildings comes from Jericho (KENYON 1957). Here a stone tower and associated wall were uncovered. K. Kenyon explained those two structures as having a defensive function, although the re-interpretation of the tower and wall at Jericho by O. Bar-Yosef (BAR-YOSEF 1986) is interesting. He considered the wall to be a protection against flash floods, as the location of Jericho demanded. Concerning the tower, O. Bar-Yosef and D. Naveh (BAR-YOSEF 1986; NAVEH 2003) have argued that the tower presented a ritual focal point for the community and that the tower might have been a shrine. The latter interpretation seems interesting if we take into account that one side of the tower is surrounded by oval and circular structures. Those structures were interpreted by K. Kenyon as storage facilities (KENYON 1981). So it may be that we have a shrine or ritual building associated with storage features that are spatially related. If so, the spatial relationship between the storage facilities and the shrine might indicate the presence of a mutual economic and ritual function (see below).

The association of ritual buildings with storage facilities is not unique to Jericho. At Jerf el-Ahmar, in Middle Euphrates, the communal building EA 30 was subdivided internally into six small cells with two elevated benches. The cells were proposed to have a storage function and more probably collective storage (STORDEUR 2000: 2). The communal building at Jerf al Ahmar is spatially associated with open areas, which are characterized by the presence of large ditch-hearths (STORDEUR *et al.* 2000).

### *III.2 MPPNB ritual buildings*

As mentioned above, our information on ritual buildings during the EPPNB in the southern Levant is limited. Until now there is little agreement on the presence of this sub-phase of the Neolithic the southern Levant (but see the recent excavations at Motza in KHALAILY et al 2007). Therefore, it is during the MPPNB that we can resume discussion of the presence of such buildings in the southern Levant. Examples of such buildings were found at Beidha (BYRD 1994) and Ghwair I (SIMMONS and NAJJAR 1999). The excavations at Beidha reveal two examples of ritual buildings, different from each other mainly in building style and their spatial relation to the settlement. One is a complex located *ca.* 40 m away from the residential areas. It consists of three stone structures built of upright stone slab walls. Features associated with those structures include a huge 3.0 x 2.2 m stone-slab basin and a very large, raised stone-slab platform, and a large rectangular stone in one building (BYRD 1994: 657; BYRD 2005a:25-27 for the dating of this phase to MPPNB; KIRKBRIDE 1968).

The second example from Beidha was found inside the settlement or residential area. It shares similarities with other domestic buildings but differs in its associated features. It contained very large, centrally located raised rimmed hearths, larger than those in the residential structures, and the absence of *in situ* artifacts associated with domestic activities (BYRD 1994). Both of those structure complexes at Beidha were interpreted as places for communal and ritual practices.

Another example of a ritual building was uncovered at Ghwair I. This building consists of one rectangular room (Area I – Room 1), characterized by the presence of ‘niches’ along the wall areas. The excavators assumed a special function for this room (SIMMONS and NAJJAR 1999), an idea that might be strengthened by the presence of eight bins associated with this room. Also at the site, a so-called public area was found, represented by a staircase that might have led to a plaza or common meeting area (SIMMONS and NAJJAR 2006). In Area 4 at the site and in one of the rooms, a “cache” of goat and cattle skulls lying directly on a plastered floor were uncovered. Beneath the floor an intact skeleton of a young human was exposed. The excavators speak of this room as a workshop of some sort, but do not correlate it with any ritual or special purpose function because of the presence of a “cache” of chipped stone blades

and points, a polishing stone with malachite imbedded in it, and several malachite pendant “blanks” (SIMMONS and NAJJAR, 1999: 5). However, A. Simmons (SIMMONS 2007: 173) argues for a secular or political function for the complex structural features at Ghwair I. It was a place where community-wide information was relayed. But what is the situation with the complex building (Room 1) and its associated eight bins? It seems that more than information relay took place and was organized there (see below).

The site of Kfar HaHoresh is also noteworthy during the MPPNB. The site has been interpreted as mortuary cult centre (GORING-MORRIS *et al.* 1998) and is characterized by the absence of residential buildings. In particular, what have been called mortuary installations were uncovered at the site, which included plastered surfaces, grouped monoliths and stelae (*ca.* 1.5 m high), ashy pit fill with animal and human bones, and hearths and midden deposits containing burnt stones and animal bones (GORING-MORRIS *et al.*, 1998: 2-4). Those installations indicate that some kinds of mortuary ritual were practiced that might have served nearby settlements.

Beyond architectural remains, the MPPNB is characterized by the presence of other archaeological materials that hint at the nature of ritual practices. That evidence includes burials, statues and figurines (VERHOEVEN 2002a).

### *III.3 LPPNB ritual buildings*

The LPPNB period is well represented in the Levant, especially in the south. At several excavated sites, broad horizontal exposures of LPPNB structures have been made. With respect to ritual buildings during the LPPNB, key sites are ‘Ayn Ghazal and Beidha in Jordan (BYRD 1994; ROLLEFSON 1998b, 2000; ROLLEFSON and KAFABI 1996, 1997). At Beidha, during phase C, two ritual buildings were uncovered. They differ from domestic buildings in their rectangular plan, size, low frequencies of *in situ* artifacts indicative of production and consumption activities, the presence of a large, raised rimmed hearth (*ca.* 1.45 m in diameter), and in one room an oval monolith (0.7 m x 0.5 m in diameter and 1.0 m in height) (BYRD 1994: 656-657). Those two ritual buildings at Beidha were not contemporary with each other since one underlies the other. But their location and associated architectural features are significant. They are located in the centre of the settlement (Fig.2), built upon each other, they were spatially restricted between two

dense building clusters (the southern and northern clusters) and they opened onto an associated courtyard space, which was bounded on one side by the only exterior storage facility at the site (BYRD 1994: 655-657).



**Fig. 2: plan showing the PPNB temple at Beidha and the associated storages features and courtyard. Arrow hints at the probable two story building belongs to the ritual building (after Byrd 1994: Fig.7).**

At 'Ayn Ghazal, different buildings were uncovered at three main parts of the site: the so-called North Field, Central Field and the East Field. In those fields, three building styles of the special buildings were found:

1- Apsidal buildings: they have one apsidal end in a rectilinear design. Four examples of such buildings were found at 'Ayn Ghazal: one in the Central Field, one in the East Field and the two in the North Field.

2- Circular buildings: two buildings in the North Field (called Shrine I and II). One was erected after the other had been destroyed.

3- Rectangular buildings: with exotic interior features and furniture in the East Field (KAFABI personal communication; ROLLEFSON and KAFABI 1996, 1997; ROLLEFSON 1998b).

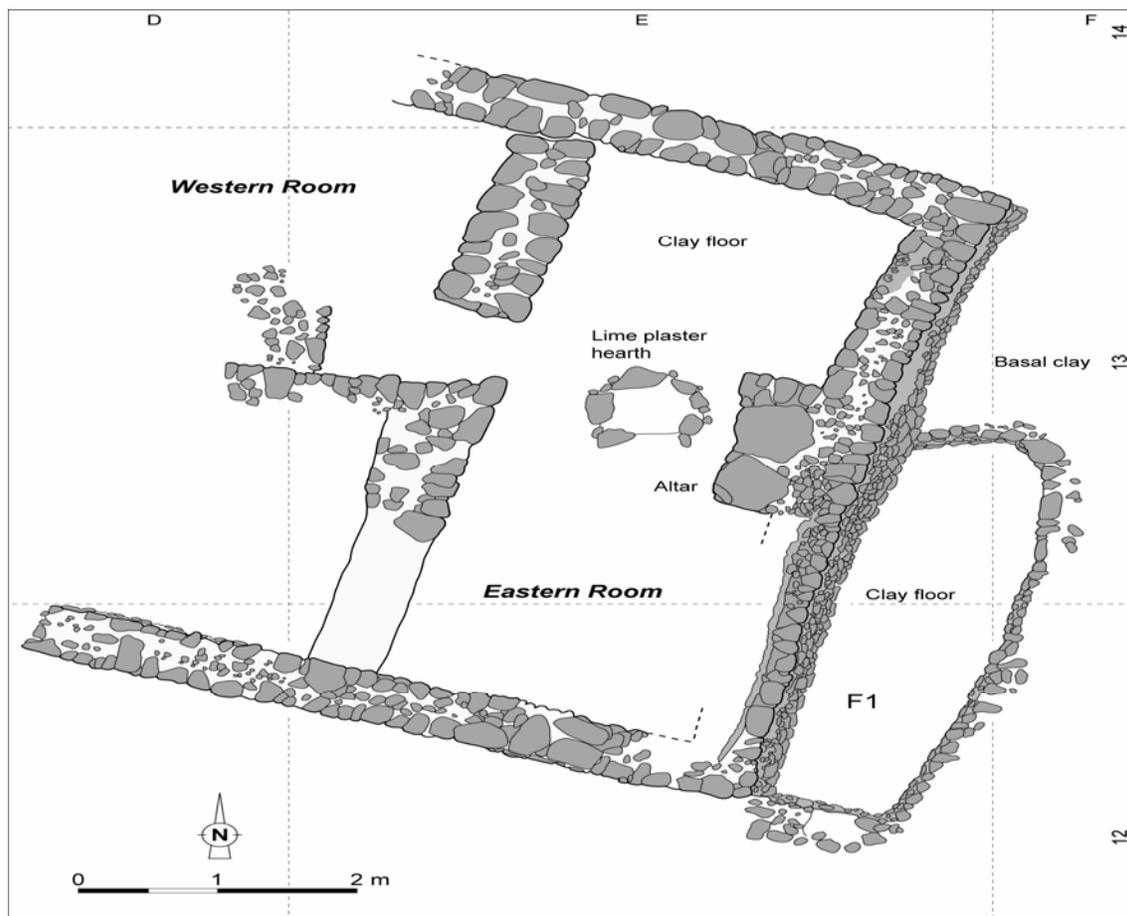
The excavations in the North Field at 'Ayn Ghazal revealed a special LPPNB building with four major phases of construction and renovation. Earlier phases (1-3) are represented by a building with a rectilinear design with one apsidal end. Later on, the apsidal plan was reformed to create a circular plan (Phase 4). It has a diameter of 2.5 m, and a large circular hole 65 cm in diameter and 40 cm deep is located in the center (Fig. 3). The circular building has a sequence of eight red-painted lime plaster floors (ROLLEFSON and KAFABI 1996, 1997). This building has a rectangular anteroom, based on the extensions of the plaster floor, to the east and north east of the building.



**Fig. 3: the northern Field ritual complex at 'Ayn Ghazal. It shows the circular ritual building and the two storied building to the northwest. (after Rollefson and Kafafi 1996: fig. 3)**

A second circular structure replaced the first one. It was built just 4 m to the south of the first circular building. The later building was built from small (20-25 cm) globular masses of soft limestone and has only two superimposed red-painted lime plaster floors. The material used in its construction and the sequence of two plaster floors supported the suggestion that this building was not in use for a very long period of time (ROLLEFSON and KAFABI, 1997: 37).

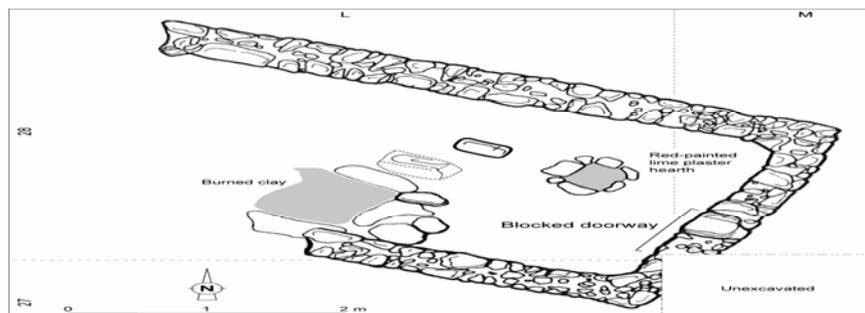
Separated by the Zarqa River, other LPPNB ritual buildings were found in the East Field at 'Ayn Ghazal. The most remarkable building is one that has a rectangular plan. That building differs from the ones in the Northern Field in its design, both in plan and associated features (Fig. 4). It consisted of two rooms (the eastern and western rooms), separated by a wall from each other, and almost in the center, a doorway was opened that created access between those rooms.



**Fig. 4:** plan showing the LPPNB Eastern Field ritual complex at 'Ayn Ghazal. (after Rollefson 1998b: fig. 11)

The floor is made of clay and, about 1-1.5 m from the east wall, a low pentangular lime plaster surface with a maximum width of 65 cm – interpreted as a hearth – was found. To the southeast of the hearth are three large rectangular stones standing on the end and aligned in a north-south direction, which might have served as an altar (ROLLEFSON, 1998: 51-53). Against the northern wall of the eastern room, a stone “cubicle” was built. Outside the eastern room, a small room (F1) about 4 x 1.25 m to a depth of more than a meter was built, which might have been used for storage (ROLLEFSON and KAFABI, 1997: 28-29).

In the East Field at ‘Ayn Ghazal another ritual building was exposed. It is special in terms of its location and building design. It is located in the halfway up the hill in the centre of the East Field, in an area characterized by a steep slope (35%). The building is rectangular in plan and measure ca. 5 m EW by 4 m NS (ROLLEFSON 1998b: 48-49) (Fig. 5). The floor is made of dirt clay and not lime plaster, as is usually found in LPPNB houses. Special features associated with this building include a row of three standing rectangular limestone blocks (70 x 25 to 35 cm). Between those stones and the eastern wall a red-painted lime plaster hearth is found. Other furniture of the ritual building includes a floor feature defined by two long rectangular blocks. During the life-history of the building (phase 2) a low stone platform (25-30 cm high) was constructed between the northernmost standing stone and the northern wall. Moreover, during the second or third phase a doorway in the southeastern corner of the eastern room was blocked. In this area of blocked doorway is an orthostat that has a roughly oval section and a bulge at the top of the stone, which gives an anthropomorphic aspect to the column (ROLLEFSON 1998b: 51). To which extent this building is contemporary with the rectangular building mentioned previously is not clear.



**Fig. 5: plan showing the LPPNB ritual building in the Eastern Field at ‘Ayn Ghazal (after Rollefson 1998b: Fig. 6).**

#### **IV. The spatial context of LPPNB ritual building**

After presenting the design characteristics of the ritual buildings, we will address in this section the spatial contexts and relationships of those buildings to their surroundings. This aspect is important if we want to understand the probable features related to the main building and the functional interrelation between them. Furthermore, the spatial context of ritual building will expand our understanding of the buildings as symbolic ones to incorporate their surroundings in order to understand their probable roles.

In the North Field at 'Ayn Ghazal the apsidal and the later circular buildings were segregated from other structures. To the north the circular building is separated from surrounding buildings by a courtyard wall (Fig. 3). The floor of the courtyard was plastered – perhaps the floor of MPPNB house. Several fire-pits were found in this courtyard, and interestingly, a large amount of animal bones were found as well (ROLLEFSON and KAFABI 1997). The large amount of animal bones might be a hint of consumption beyond household needs.

To the northwest of the ritual building and the courtyard a large two-storied house was found (Fig. 3). Although part of it was destroyed during highway construction in the 1970s, it has been assumed that this large house consisted of 11-12 rooms (Fig. 2). Its dimensions are *ca.* 7.4 m (N-S) by 9.5 m (E-W) (ROLLEFSON and KAFABI, 1996: 13-14). Inside, Rooms 3, 4, 5, 6 and to a lesser extent Room 8 contained dense amounts of charred pulses. The number of storage rooms and the amounts of charred pulses found associated with this building makes it different from other LPPNB domestic buildings at 'Ayn Ghazal. Moreover, in the area of this two-story building, there were five pairs of gazelle horns still articulated with skull fragments (ROLLEFSON 1998b: 56). This might be an indication that this building had a role in the realm of ritual.

It seems more probable that the large two-storied building, the circular ritual building and the courtyard with its associated features and finds were spatially interrelated. They might have formed a special building complex that had a symbolic meaning to the LPPNB 'Ayn Ghazal inhabitants and at the level of the social group, especially the ones who lived in the western side of the Zarqa River.

A similar special building complex can be distinguished in the Eastern Field at

'Ayn Ghazal. In addition to the rectangular ritual building, there was a courtyard that showed intensive outdoor activities. The courtyard is located just to the east of the ritual building. This courtyard seems to be divided into areas by setting walls one stone thick. One of those walls might have served as a wind break for associated small, stone-lined and slab-based fire pits. Other features in the courtyard include a bowl-shaped basin made of lime plaster which is *ca.* 40 cm in diameter and *ca.* 25 cm deep. A flat surface paved with yellow clay plaster was also found in proper relation to the courtyard. In association with this floor, several grinding stones were found, which might be a hint that this was a special activity area for food processing (ROLLEFSON and KAFAFI 1996: 20). It should be noted that this area of Eastern Field at 'Ayn Ghazal is characterized by a sharp slope (30%) which makes it difficult to demonstrate a stratigraphic relationship between this food-processing area and the ritual structure, but a possible correlation might be evident, although it might be earlier or later than the ritual structure.

Similar to the North Field, it seems that special activities, beyond the household scale, were conducted in close relation to the ritual building in the Eastern Field. Therefore, we might speak of a special building complex in the Eastern Field (consisting of the ritual building, a courtyard and storage structure, and obvious food preparation tools), which might have a symbolic meaning for the social group who lived in the eastern part of 'Ayn Ghazal.

The LPPNB ritual building at Beidha is significant in terms of its design and its location within the settlement. The ritual building is located in the middle of the settlement (Fig. 2). The ritual building at Beidha (the so-called large building) is separated from nearby corridor buildings on the west and south sides by a courtyard measuring 5 x 12 m. Close to the courtyard on both the north and east side was a refuse dump area, characterized by a high amount of bones and flint debris (KIRKBRIDE 1968: 13). During the subphase C1 the courtyard formed an access from the western to the eastern part of the site. The situation, however, changed during subphase C2. The ritual building was enlarged and decreased the size of the courtyard. The courtyard was enclosed by walls. This enclosed courtyard included a multi-chambered outdoor facility, which was the only independent storage facility greater than the other domestic buildings, consisting of four rooms that ranged in size

from 0.6 to 1.6 m<sup>2</sup>). Areas with large hearths and roasting pits were found to the north, southeast, and east of the cluster of buildings (BYRD 1994:654). The change in the relationship of the ritual building to the corridor buildings during subphase C2 is interesting. It is only during this phase that access from the southern room of the ritual building to the upper floor of the adjacent two-story corridor building (building 73) was possible (BYRD 1994:657). Except for this two-story building, none of the other buildings had access to the ritual building or opened directly onto the enclosed courtyard.

The case of Beidha shares some similarities with 'Ayn Ghazal in that the ritual building was a complex structure consisting not only of the building itself but also of the storage facilities, courtyards and special two-story building that might have had a interrelated function with the ritual building.

If we propose a conclusion about the above mentioned ritual buildings in the Neolithic period (PPNA-PPNB), we may suggest the following types:

1- Communal buildings (PPNA Jerf el-Ahmar, Tell 'Abr, Mureybet), symbolized by their styles and associated features that were different from other domestic buildings. The focus was on the building itself and to a lesser extent on its surroundings. As D. Stordeur (STORDEUR, 2000: 42) described them, those buildings were multi-functional (storage, ritual and meeting).

2- Open-space symbolic sites (such as MPPNB Kfar HaHoresh), where specific ritual activities such as mortuary practices took place.

3- Non- domestic building complexes (MPPNB Ghwair I, LPPNB Beidha and 'Ayn Ghazal), consisting of more than the main building, with attached storage structures, courtyards or open spaces. Besides their symbolic meaning to the inhabitants of the settlements, ritual buildings are places where ritual activities are carried out (as indicated by the courtyards), and include storage facilities, and special buildings either have direct access to the ritual building or are found close to it.

Those types of ritual buildings or ritual places hint at a transformation in the ritual realm that might have had to cope with social and economic changes during the different stages of the Neolithic period. In the following pages we will present different interpretations of the roles of ritual buildings and try to expand those interpretations in the context of the LPPNB period.

## V. Interpreting the role(s) of ritual buildings

In recent years, many studies have been devoted to interpret the ritual behaviors of the Levantine Neolithic communities (CAUVIN 2000; KUIJT 2000a, 2002; VERHOEVEN 2002a and references cited; ROLLEFSON 1986, 1998b; STORDEUR *et al.* 2000). Archaeological evidence such as mortuary practices, figurines and statues, and the so-called communal or ritual buildings have been analyzed to understand the nature and role(s) of ritual behavior inside the Neolithic societies. Those studies showed that the rituals were structured at three levels inside a community: individual, household and intra-community (VERHOEVEN 2002a). We are concerned here with the third level of ritual – the one that played a role at the community scale. This scale of ritual has been understood in terms of statuary ('Ayn Ghazal and Jericho), secondary mortuary practices and ritual or ritual buildings. With respect to mortuary practices, for example, it has been suggested that ritual behaviors associated with mortuary practices would have social meaning. Those behaviors would maintain community coherence, a need arising from the uncertainties of the economic systems of the community, and reduce the chance of conflicts. Hence, communal rituals were a means to mediate between members of a social group (KUIJT 2000a).

The role of ritual practices to reduce social conflict has been ascribed to the ritual buildings. The sedentary societies of the PPNA, even if they were still hunter-gatherers, built such buildings to regulate social relations and reduce conflict that might have arisen by living at one site (ROSENBERG, 1999: 27), or as places of meeting, storage and ritual (STORDEUR *et al.* 2000: 42-43). It would be more probable to consider the role of those buildings with PPNA societies as meeting and feasting places for social groups at specific times in the year (see BENZ 2000, 2006 on the role of feasting). There is no evidence for social conflict at one site or between sites and there is no evidence for population aggregation or crowding at PPNA sites, which, except for Jericho, are less than 2 ha in size. Those characteristics of Neolithic societies (population increase and aggregation) have been well attested during the LPPNB. Expanding upon ritual buildings, G. Rollefson proposed a role for these buildings as follows (ROLLEFSON 1998b: 57):

There are important aspects of social organization entailed in such religious edifices. It is clear from the archaeological record that the southern Levant experienced serious

difficulties beginning with the mid-7th millennium, and these stresses must have multiplied the centrifugal forces of individual family interests that increasingly threatened to split communities apart. While kinship groups were involved in securing economic security, even at the expense of competing kin groups in the settlement, the cooperation of unrelated families in the pooling of labor – sometimes a considerable amount – for the construction of communally enjoyed religious buildings served to dilute the strength of self-interests, and the practice of rites directed toward the common good would have added to the feelings of community and to the bonds of social unity.

The above proposition depends on the cause-and-effect model to explain the function of the ritual buildings during the PPNB period (the purpose behind erecting such cultic buildings). The cause was assumed to lie in the environmental realm that might have resulted in the degradation of the economic bases of the population. Derived from the ecological theory, this would have had an effect on social organization or relationships. One or more divisions in the population could be one form that such an effect took. This in turn would be mediated by ritual activities that played a role in promoting social unity. This model presents the ritual buildings as a means to overcome natural crises, that is, they would have a situational function. But we will build on this situational function of ritual buildings to expand the other roles that these building might play inside the social groups who built them, and also to explain the different contemporary ritual building styles that were found during the LPPNB at sites such as ‘Ayn Ghazal.

Once again, social conflict is at the center of the above explanations, for it seems that prehistoric societies lived in such competition and conflict that they needed a mechanism to maintain social cohesion. However, the archaeological evidence does not support strongly the presence of conflict either inside or between Neolithic societies. Hence, it might be better to think about the cooperative aspect, the regulation of economic practices and resources as a need derived from both population aggregation and growth and the restriction of economic resources (especially cultivated land).

In the following, another interpretation for the role of ritual buildings will be proposed. The focus will be on the circumstances in which those buildings could

have been founded and how they played a role as a mediator among the social units of the communities. Moreover, I assume that both the economic and social aspects are integrated to the extent that ritual buildings cannot be understood without the identification of this relationship. That is, more emphasis will be placed on expanding the role of ritual buildings to accommodate the economic and social changes that characterized the LPPNB societies. Another aspect of interest will be to examine the extent to which the role those buildings had on the egalitarian ideological system of the LPPNB communities.

## VI. Discussion

The sites dated to the LPPNB are characterized by large settlements that ranged in size up to 10 ha and more. That is different than the ones that dated to the MPPNB, which appear not to have exceeded 4-5 ha (BIENERT *et al.* 2004; KUIJT 2000b; SIMMONS 2007). The change in LPPNB settlement size has been seen as an indication of demographic change either at sites that were inhabited in the previous period (such as 'Ayn Ghazal and Beidha) or at ones that were newly established during the LPPNB period (such as Basta, 'Ayn Jammam and es-Sifiya). To explain that demographic change, two factors might have been involved. The first one might have been a result of normal population growth that resulted in an increase in the communities; meanwhile the second factor may have been a result of population aggregation (KUIJT 2000b; ROLLEFSON 1989). Most scholars agree that population movement in central and southern Levant caused the aggregation of social groups in the LPPNB large villages or towns to explain their sudden growth.

Another social change, documented during the LPPNB, is in domestic architecture. The study of domestic buildings reveals a change in the type of social organization compared to the MPPNB (ROLLEFSON 1998a; BYRD 2000). During the MPPNB, the dominant domestic building was composed of a single room. That is not the case at 'Ayn Ghazal, where houses were single-roomed structures at the beginning of the MPPNB, but through time evolved into two- and even three-roomed buildings (ROLLEFSON personal communication). In both cases, even with the increase in the number of rooms, the basic social unit remained the nuclear family since the size of the houses did not increase (BYRD 2000). By contrast, during the LPPNB multi-roomed and two-storied domestic buildings are

common. That, for many scholars, was correlated with a change from nuclear to cooperative social units such as extended household organization (FLANNERY 2002). The architectural evidence from sites such as 'Ayn Ghazal (ROLLEFSON 1998a ), es-Sifiya (MAHASNEH 1997), Basta (NISSEN *et al.* 1987; GEBEL *et al.* 1988; NISSEN 2006), el-Basît (FINO 1998), Ba'ja (GEBEL and BIENERT 1997), and 'Ayn el-Jammam (WAHEEB and FINO 1997) may support such an assumption.

Based on the settlement size and domestic building type, it may well be that a process of social restructuring took place during the LPPNB. The causes of such a process could lie in three factors: first, to cope with the environmental degradation that began in the LPPNB; second, to cope with a demand on the economic practices; and third, to cope with new forms of social organization as a result of social aggregation and population growth. The first and second factors are interrelated. The LPPNB period has been described as based on an extensive dependence on agricultural products (wheat, barley, pulses), and animal husbandry to sustain the population's economic demands. It was also a period that showed less ability to rely on hunting to support the nutritional needs of the people due to the destruction of natural habitats during the MPPNB (ROLLEFSON 2008: 85-86). Therefore there was an economic trend toward greater productivity in the agriculture and herding, and that could be correlated with the needs of cooperative social units rather than nucleated ones. Hence, a social organization based on the extended family would be the proper one to cope with the labor needed.

The aggregation of social groups, the third factor, is the most critical one that might have affected social restructuring at the community scale. By aggregation, I mean two or more social groups who lived side by side at one site, although one of them might have preceded the other in their residence at that site. Population aggregation at LPPNB sites in Jordan has been seen as a cause of the relocation of people from the Jordan Valley and Palestine (ROLLEFSON 2000; KAFABI 2004). Such a social phenomenon can be inferred from the archaeological record based on architecture or material culture production (see below).

However, what can be significant in this regard is the relationship among economical practices, resource management, and the social realm in this case. We will assume that in the case where two or more social groups lived side by side at one site

and practiced agriculture as an economic strategy, a process of land management will be developed to accommodate increased demand. Agricultural land, as a main asset for farming societies, would be allotted among those social groups. That process would produce a system of dividing the land between the social groups (intra-group level), with each group maintaining the allotment of the land among its members. Therefore, the land as a spatial unit would reflect the social structure. Each of them will have its own pyramid pattern reflecting the allotment of land within each social unit.

How can the relationships between that pattern of social re-structuring and ritual buildings be explained? At most excavated sites of the LPPNB, one ritual building was reported at each site (Beidha). The situation at 'Ayn Ghazal is different, however. Many such buildings there were in existence in the same period according to the excavators, although it cannot be determined if they were in use at precisely the same time. That is due to the absence of details (ROLLEFSON 1998b). Two were excavated in the North Field and the other three in the East Field.

Significantly, those ritual buildings were built in different architectural styles. The two buildings in the North Field have a circular form, while two in the East Field have a rectangular shape and one has an apsidal plan. Except for the last one, the two other building styles were far removed from each other and were separated by a natural border, the Zarqa River. The emphasis on style as a social marker has been accepted among anthropologists and archaeologists (LEMONNIER 1986; WIESSNER 1983, 1990). Hence, the different ritual building styles at 'Ayn Ghazal might be explained at two social scales. The two ritual building complex styles, the circular one in the North Field and the rectangular one in the East Field might have served two social groups that co-existed at the site during the LPPNB. Meanwhile, the small apsidal ritual building style might have served a social subgroup.

Those socioeconomic transformations during the LPPNB seem to have affected the role(s) of ritual architecture. An analysis of ritual buildings and their spatial relations with other structures and features would help in understanding those roles. As noted above, the site of 'Ayn Ghazal and Beidha yielded excellent horizontal exposures enabling an understanding of the spatial relationship of ritual buildings to their surroundings. Those buildings were not built in isolation but seemed to be correlated with storage facilities, courtyards, features such as hearths, and a proper

special building. Thus an economic role for those ritual buildings must not be overlooked, since it is indicated by the storage rooms (a few at 'Ayn Ghazal and four at Beidha). Inside the 'Ayn Ghazal two-storied house, large quantities of pulses were found. The same can be ascribed to room (F1) of the ritual building in the Eastern Field, which has been interpreted as storage room (ROLLEFSON 1998b: figs. 11, 13). The same can be said about the small storage rooms in the courtyard of the ritual building at Beidha. Ethnographic observations about modern farming societies show that each household has one attached room used for storage (KRAMER 1982; ALI (in preparation); observations made in villages in Jordan show that each household maintains its own storage facilities either as an attached room or features made of clay built against the wall of the main room. Therefore, a correlation between the storage rooms and a single household unit might be less probable if we compare it with other LPPNB households.

I. Kuijt (KUIJT 2000b: 93) proposed that building two-story structures was a method of accommodating the crowding of people at the LPPNB communities. It would be proper to accept this proposition if the first floor was a place for living and previously planned as a family residence, and the second floor was built later on to cope with an increase in population. However the situation is different, since the first floors at the sites of Basta, Beidha and 'Ayn Ghazal<sup>1</sup> were explained as storage facilities and / or manufacture areas, not residential rooms (e.g. BYRD 2005a). They were therefore a complex building plan from the outset to contain two separate but related functions: storage and production areas and living areas. The storage rooms at Beidha inside the courtyard associated with the ritual building is worth mentioning here. Those rooms showed a higher capacity compared with the other domestic buildings. Such storage capacity might be correlated with the two-story building at 'Ayn Ghazal as well. It seems that agricultural crops were collected and stored for the needs of more than a single household unit. The attachment of storage facilities to ritual buildings might have played a role in the organization of agriculture production such as storage and

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<sup>1</sup> The two-story building at 'Ayn Ghazal has been assumed by Rollefson (1997) as representing something akin to apartment dwellings for several related families. That is, the building was entirely domestic. However, the sizes of the ground floor rooms are ca. 1.9m<sup>2</sup>, 2.5m<sup>2</sup> and 3.1m<sup>2</sup>, so it seems that the rooms were not for domestic use due to their small size.

redistribution of crops at the communal scale for a social group composed of different lineages. Seen in this light, ritual buildings were an evolving mechanism that regulated the integration and relation of the different social groups who lived at one site. The same mechanism might be ascribed to the MPPNB special building with its associated bins at Ghwair I (SIMMONS and NAJJAR 2006).

The corporate social groups ascribed to the LPPNB developed a socioeconomic organization that maintained the social order and unity of its members on the one hand, and an organization that included a mechanism for the redistribution of collective agricultural products on the other. Ultimately it was based on the allotment of land as a main asset among its members. The land division became important when the LPPNB population suddenly exploded. The socio-cultural complexity of the LPPNB period seems to be reflected in the complexity of the society's organization that showed evidence of centrality. The role of the realm of ritual expanded from a regulatory mechanism and bounded the social group to one involved in the economic sphere of the society. That transformation of the ritual realm can be correlated with the role of redistribution of agriculture products beyond the household unit. That role of ritual building, it can be added, maintained the egalitarian ideology and group coherence of the LPPNB societies.

Another cultural aspect related to the LPPNB ritual building complexes can be proposed for the symbolic domain. The building complexes showed cooperation in labor and intensive expenditure of energy in their construction and design, whether in terms of plaster floors, features associated with the building, etc. Thus, as monuments, they conveyed messages of wealth and power, as postulated by T. Earle (EARLE 1997: 156) concerning the monument buildings. Those buildings became representative of social group wealth and identity either at the village or inter-village scales.

To sum up, the case of ritual buildings during the LPPNB in the southern Levant showed differences from the PPNA. At some sites in the northern Levant storage facilities have been found either inside the communal buildings (Jerf el-Ahmar, Mureybet) or attached to them, as was the case in Jericho in the southern Levant. Those types of buildings were founded by hunter-gatherer societies, for there was no evidence of domesticated plants and animals. The concept of sharing

(or general reciprocity) has been emphasized among hunter-gatherer societies. Communal feasts have been proposed as a role associated with those buildings mediating stability at the intra-group scale and reinforcing alliances among its members (BENZ 2006).

The above explanation for ritual buildings and the causes that played a role in their development and maintenance can explain their collapse in the following periods in the southern Levant. So far, archaeological excavations at several PPNC and Yarmoukian sites in the southern Levant show the absence of ritual buildings. Such a phenomenon has been correlated with the loss of communal ritual practices that dominated in LPPNB to one that was related to individuals and households during the Pottery Neolithic period (PN) (VERHOEVEN 2002a: 8). The size of PN settlements certainly indicates small social groups compared to the LPPNB ones.

### **Conclusion**

The LPPNB in the southern Levant is characterized by large populations living in towns or villages exceeding 10 ha in size. Social group aggregation and to a lesser extent population growth were causes of the rapid growth of those settlements. Living in large communities required a restructuring of social relationships to cope with available resources. Scarce (?) agricultural land as the main asset and the need for cooperative labor in the fields were mediated through the transformation of ritual activities that centered on complex ritual buildings. Those buildings became the place where storage and redistribution of harvests took place. That mechanism reinforced and regulated social relations between families, and maintained the egalitarian ideology of the LPPNB societies.

This study has also shown that the aggregation of social groups at one site might be reflected in each group ritual building style. Building style, as a social phenomenon, has been seen as reflecting social group identities and regulating intercommunity relations.

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