

Central Settlements in Neolithic Jordan

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Central to What? The Centrality Issue of the LPPNB Mega-Site Phenomenon in Jordan¹

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The Mega-Site Debate

The workshop "Central Settlements in Neolithic Jordan", held in Petra/ Wadi Musa in July 1997, was the most important event for achieving wider mutual understanding on the large Jordanian LPPNB settlements as belonging to a hitherto ill-understood but well-attested Early Neolithic phenomenon of the southern Levant: the sudden emergence and vanishing of huge sites between 7500 and 6900 BC in the semi-arid fringes of the Jordanian Highlands, with features seemingly anticipating later complex societies.

The research history of this "hypertrophic" (Nissen, this volume) phenomenon is easily comprehensible: Gary Rollefson was the first to address it as a possible phenomenon and to introduce

¹ This contribution is the revised lecture I gave at the Central Settlements Symposium in Wadi Musa, July 1997; it was completed in late 1999. Elements of it were and are published later on at various other occasions; the references to these were included in the bibliography (*e.g.* Gebel 1992b, 1998, 2002a, 2002b; Nissen, Muheisen and Gebel, in prep.). Some footnotes of this contribution are later additions. Since an opinion similar to Fig. 1 - a map presented to the symposium in July 1997 and first published in the web in mid 2002 (Gebel 2002b) - appeared without attribution in 2002 (Kuijt and Goring-Morris 2002: Fig. 13), I feel it necessary to explain that this graphical expression of the idea had been strongly inspired by Gary Rollefson before 1997. However, neither in 1997 nor today do I understand the Mega-Site Phenomenon in the Jordanian Highland territories as a "demographic movement" in the sense of moving populations, but rather as the movement of a successful socio-economic paradigm which could expand along the Jordanian semi-arid fringes due to their favorable conditions (game-rich steppe habitats), positively modifying its social, technological and economic ingredients. I assume population pressure or movement only across the Rift Valley from W to E, possibly in several waves through passages like Wadi Mujib, Wadi Feinan, *etc.* In this sense, my 1997 map may have been misunderstood by other authors. This contribution refers to calibrated radiocarbon dates before Christ (B.C.).

the term "mega-sites" in the mid eighties, starting from his 'Ain Ghazal perspective. However, there exists an earlier notion of the phenomenon in the Oldest Town- Debate between Kathleen Kenyon and Bob Braidwood (Kenyon 1953, 1956; Braidwood 1957). From the second half of the eighties Rollefson's idea has constantly been fueled by new pieces of evidence: Basta (Gebel, Muheisen and Nissen 1988; Nissen, Muheisen and Gebel *et al.* 1987, 1991; Gebel, Muheisen, Nissen and Qadi *et al.*, this volume), Ba'ja (Gebel 1988; Gebel and Bienert *et al.* 1997; Bienert and Gebel 1998; Gebel and Hermansen 1999, 2000, 2001; Gebel 2001), Wadi Shu'eib (Simmons, Rollefson and Kafafi *et al.* 2001), es-Sifiya (Mahasneh 1997, this volume), 'Ain Jammam (Gebel 1992a; Bisheh 1993; Waheeb and Fino 1997; Fino, this volume), Ghwair¹ (Simmons and Najjar 1999, 2000), al-Hammeh (Rollefson 1999), and al-Baseet ('Amr, this volume), although many of the excavators were not aware from the beginning that they were dealing with a mega-site or a site established by the mega-site momentum.

The Oldest Town Debate returned to the Neolithic academic community prior to 1997 by the new arguments of G. Rollefson, who modified it into something like the Oldest Temple/Town-Debate. "Proto-Urbanism" was discussed as being a potential characteristic of the Mega-Site Phenomenon (see *e.g.* Bienert, this volume), which was opposed by several colleagues (*e.g.* P. Mortensen, during the symposium; H.J. Nissen, this volume; H.G.K. Gebel, this contribution and Gebel 2002a, b; see also *Neo-Lithics* 2/97, a special issue on the symposium), or not taken up by others. However, it was only by the provocative statements of G.O. Rollefson on LPPNB temples and towns that research made progress at this moment, that colleagues felt it imperative to gather in a symposium to discuss the actual findings and to study the chances for achieving mutual understanding on a phenomenon which had started to invoke so many highly speculative explanations. The term "Proto-Urbanism" was also found instrumental for initiating a vivid discussion and forcing the expression of clear positions, as well as for the raising of funds for the meeting. It may appear a disadvantage today not to have had invited the colleagues working west of the Rift Valley to participate in the debate. Two major reasons appeared relevant for this decision: first, that the Jordanian Neolithic family wanted to settle on some issues of self-understanding before a wider discussion was opened, and secondly, that security problems were somewhat difficult to foresee.

While "Proto-Urbanism" as an explanatory framework disappeared from the mega-site discussion, beginning with the symposium, the concept of LPPNB "towns" and "temples" has continuously been supported by a smaller number of colleagues, and is ignored by most others. While the town² debate appears not very useful, because it hampers the understanding of the evidence as a phenomenon of its own and forces an understanding predominantly in the light of later developments, the LPPNB temple debate appears most necessary and requires a wide perspective and discussion in the Middle East. Although the residential character of the LPPNB settlements provides little evidence for central ritual buildings (so far only claimed for 'Ain Ghazal, *cf.* Rollefson 1998), the earlier evidence (since the PPNA) of such from the northern Levant (Göbekli Phenomenon) should make us very cautious about rejecting their probability for the LPPNB sphere of the south. We would again be about to underestimate the diversity and variability in ritual life during the early Neolithic.

¹ It is the author's opinion that Ghwair I relates to the Mega-Site Phenomenon. Just as in the case of Ba'ja, we should assume that sites like Ghwair and other LPPNB Wadi Fidan sites started to flourish in the course of establishing mega-sites. Ghwair might even be taken as an early basis for the Rift Valley expansion of the phenomenon. The (MPPNB) radiocarbon dates of Ghwair contradict its LPPNB cultural evidence, which represents a serious problem that often remains ignored.

² The neutral term "mega-site" avoids the denominations "town" and "village", which have different meanings when translated into languages other than English. This might be an additional (also psychological) reason for the confusion in the discussion about the mega-sites. If we stick to the Greek terminology, the correct term for a mega-site should be "*mega-komai*". This term would imply more of what we actually have to deal with, and which is not covered by any of the meanings of "town" and "village" in other languages: a (usually unfortified) settlement, central to a smaller region, which is not a village and still not a large town that dominates over others. I thank Kalliope Sarri for discussing with me this linguistic issue.

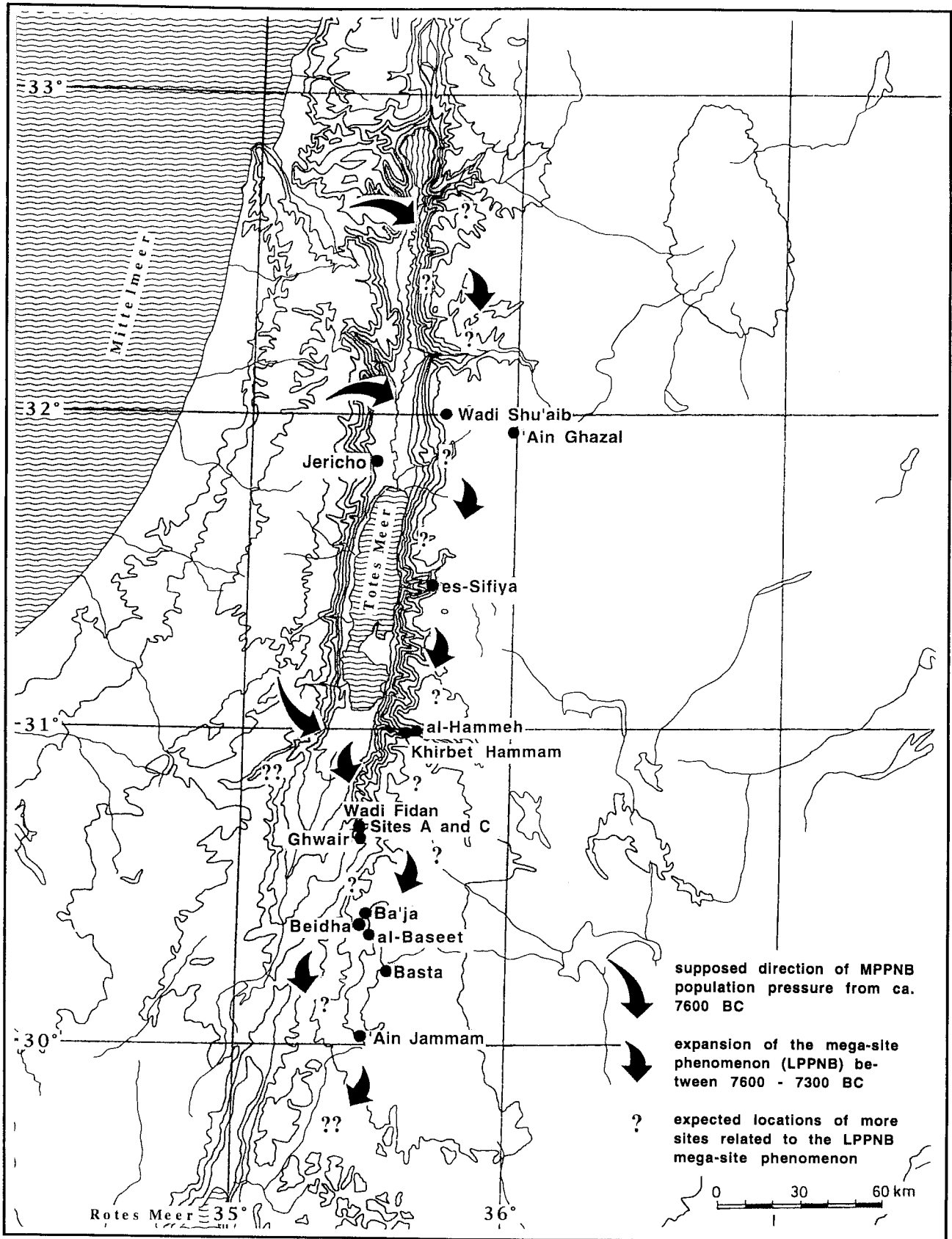


Fig. 1. Location of mega-sites and sites related to the Mega-Site Phenomenon, and supposed expansion of the mega-site socio-economy.

The beginning of the mega-site debate deserves criticism for trying to place this hypertrophic episode into the socio-economic trends of the early Near East (Gebel 1997): "A sudden rise in settlement size is attested, but not necessarily an increased number of settlements. A central function may be stated for the mega-sites with respect to their organization of habitats, but not necessarily is "centrality" in the sense of central places in a web of subordinate settlements. Division of labor can be observed in the *chaînes opératoires*, but not necessarily is coincident with advanced social hierarchies." *et cetera*. The phenomenon in my view happened to be a premature start of a development for which it is not justified to make a prognosis with reference to the later proto-historic Near Eastern developments. It deserves its own parameters of explanation, and we should not hesitate to search outside the Near East for comparative aspects ...". Today the seeds sown at the symposium can already be seen growing: a lot of interpretation is growing independent from comparisons with later developments, "historiographic" concepts like egalitarianism, tribal structures, *etc.* are being questioned or are disappearing, and regionalism or diversity approaches are gaining terrain in the discussion.

The Jericho and Mega-Site Stimuli¹

I assume that the source of the Mega-Site Stimulus' expansion southwards along the eastern side of the rift (from 7600 BC onwards, *cf.* Fig. 1) was population pressure. This population pressure originated in the Mediterranean heartlands of Palestine/ Israel and manifested in sites like Jericho, which functioned as bridgeheads for the export of a new social paradigm that developed under the conditions of population pressure. Thus I name the latter stimulus the Jericho Stimulus. Most probably, population pressure was growing already (*cf.* below) during the MPPNB in these western Mediterranean core areas of Palestine/ Israel. It doesn't appear imperative to assume a real swamping of population into the Jordanian Highlands from bridgeheads like Jericho, but such shouldn't be excluded (*cf.* Footnote 1). It may well be that we "only" have to deal with the export of a successful social (or socio-economic) paradigm (Gebel 2002b), transferred by all sorts of economic contacts across the Rift Valley, multiplying the MPPNB settlement size there (*e.g.* 'Ain Ghazal) or triggering the foundation of new large sites at rich springs (*e.g.* Basta).

Unlike the western Mediterranean heartlands, settlements here expanded on an almost "unlimited" scale in terms of food resources, due to the presence of various ungulates (gazelle species: *G. dorcas*, *G. gazella*, *G. subgutturosa*; the onager, the African wild ass) and the availability of arable lands on the vast semi-arid steppe fringes along the Arabian Plateau. But also the semi-arid parts of Wadi Araba and the southern Jordan Valley with their migrating ungulates must have been areas of such developments, whenever springs permitted permanent settlements (*e.g.* Ghwair I). This expansion, here named the Mega-Site Stimulus, followed the border between the Mediterranean zone of the Jordanian Highlands (at that time at least stretching as far S as Ra's an-Naqb/ Wadi Rum, *cf.* below) and the adjacent semi-arid regions east (Arabian Plateau) and west (Wadi Araba) (Fig. 1).

We should assume a continuous Jericho Stimulus by westerly population pressure towards the east during the PPN. The whole settlement development of the PPN in the Jordanian Highlands may have been influenced by socio-environmental factors in the western Mediterranean heartlands. I assume that such pressure had developed here already since the PPNA, and was expressed in social adaptations like those standing behind the "monumental" non-residential architecture of PPNA Jericho. Sites like PPNA Jericho (size of PPNA Jericho: minimum 4 ha) may even represent an early example of a process similar to the later LPPNB Mega-Site Stimulus: located on the Mediterranean fringe in a more semi-arid setting, the PPNA growth of Jericho was forced by favorable conditions, the ungulate populations of the valley's grazing and hunting grounds. Contrary to the occupied and stressed habitats in the Mediterranean zone, the Jericho surroundings provided progressive population dynamics with conditions for growth for a longer period of time. At this time, the wadi outlets and passages of the Jordanian Highlands might have imported new economic elements from the west into areas still predominantly occupied by foraging societies.

¹ The following section is highly speculative and has to be understood both as a proposal for a preliminary analysis and as a working hypothesis to be tested in the coming years.

Another Jericho Stimulus or wave may have been witnessed by the (early?) MPPNB, when permanent settlements in the form of villages with round structures established throughout the highlands, as far as southern Jordan. Unlike the elements of PPNA permanent village settlements spreading onto the highlands from the W, these MPPNB settlements may have developed out of local hunter-gatherer communities. But they seem to have been encouraged by a new social paradigm (core families, flat-topped chiefdoms), offered by a few permanent villages in the highlands, which were established by the aforementioned elements of the PPNA during the EPPNB. Later in the MPPNB, the local round structures joined the rectangular building traditions already established in the W. The normal MPPNB permanent villages in the Jordanian mountains seem to have reached the size of 2-3 ha.

In summary, the Jericho Stimulus could have been a repeated event throughout the 9th and 8th millennium BC, triggering mechanisms of socio-economic change "transplanted" in time and space in the Jordanian Highlands. Population pressure and disturbed habitats in the Mediterranean heartlands must be considered as the indirect source of the expansion of this Mega-Site Stimulus southwards (Fig. 1) in the Jordanian Highlands. Population pressure and ecological deficits in the heartlands of Palestine/ Israel must have forced longer corporate social structures in bridgeheads like Jericho. At the beginning of the LPPNB, they seem to have been characterized by extended families (possibly kin groups or lineage families) cooperating in cone-shaped chiefdoms, at least when establishing in central Jordan. Thus the direct source of the Mega-Site Stimulus might have been this successful socio-economic paradigm, which could have developed further after reaching the extensive steppe resources in the E, rather than actually moving populations. A possibility for a safe existence in terms of permanency of settlement and sources of food must have been provided also by the habitats along the eastern Wadi Araba, and its W-E corridors into the Arabian Plateau, where larger mega-sites developed at the rich springs.

The Mega-Site Phenomenon¹

While various researchers accept the general idea that mega-sites existed or dominated the settlement history in the second half of the 8th millennium east of the Rift Valley, disagreement appears to exist on the nature of the phenomenon. So far, 7 mega-sites have been identified within a 20-25 years' period of field research (except LPPNB Jericho), together with 5 sites that did not grow to mega-site dimensions but established during the mega-sites expansion. Except 'Ain Ghazal and Wadi Shu'eib, all the sites appear to be new foundations. We do not know if there is a pattern behind the present (meager) evidence, *e.g.* that the MPPNB existing in the N grew into LPPNB mega-sites where the hydrological situation allowed for, while those in the south were mostly new foundations.

It is difficult to make an estimate about the number of mega-sites that existed in the LPPNB. Even with their huge size, they easily escape localization due to the considerable rubble layers that their ruins are usually covered with. Indications on "closed" surfaces hardly allow the identification of a mega-site: only a LPPNB chipped and ground lithics inventory and the location near rich springs may help assume a mega-site. In fact, most of the mega-sites were identified only by sections cut into the deeper layers of slopes (road cuts, building or agricultural activities). For instance, the author searched repeatedly and without definitive success (in 1984, 1985 and 1986) for a large LPPNB site next to 'Ain Musa/ Wadi Musa, especially in the wider surroundings of Khirbet Nawafleh. Here, scarce (L)PPNB evidence was spread over very large slope areas, but no indication spoke for the location of

¹ One remark has to be added to the discussion: By looking at the geo-ecological patchwork of regions in the southern Levant (Gebel 2002b: Fig. 2), one understands how limited, isolated and progressive the geographical development of the Mega-Site Phenomenon was. This not only emphasizes the need to understand Neolithization as a polycentric event in time and space, but also requires the integration of the Mega-Site Phenomenon into a supra-regional understanding of the Near Eastern Neolithic trajectory. The Mega-Site Phenomenon was part of timely and spatially shifting interaction spheres and barriers that controlled the dispersal and re-generation of mixing Early Neolithic ingredients in changing physical and social environments. Not only did foraging economies co-exist with the Mega-Site Phenomenon in the Southern Levant, but conservative structures also remained in the western Mediterranean heartlands, giving way to a mega-site "echo", as evidenced by *e.g.* Shaar ha-Golan. Similar thoughts on co-existing developmental stages of foragers and farmers are expressed by O. Bar Yosef (pers. comm.).

a LPPNB stratigraphy. It was only in 1996 and later, when sections were cut into the slopes in the course of development activities, that the location of a huge mega-site (al-Baset; *cf.* 'Amr, this volume) was identified. Its stratigraphical, architectural and inventory characteristics fully matched the Basta evidence.

Judged by our present knowledge on the geomorphological mega-site setting we may calculate that most of the mega-sites should be expected to be found buried under tremendous rubble accumulations. These rubble accumulations rapidly entered and covered the LPPNB ruins, and are thus co-responsible for the excellent preservation of wall heights. The 1992 observations in Basta (*cf.* Gebel *et al.*, this volume) indicate that these accumulations developed during some restricted events shortly after the end of the LPPNB, mainly in the 7th millennium BC. They appear to be part of complex sedimentary processes on the slopes, in which also PPNC and Early PN activities were involved. In many cases (*e.g.* also es-Sifiya, Khirbet Hammam, Ba'ja) it is not clear where the "rubble" originates from. The rubble depositions normally are 50 - 300 cm thick downslope flows (much like "moraines"), which may contain layered depositions, old surfaces, embedded lenses or wall fragments of Post-LPPNB Neolithic occupations or activities. Their stone material appears mostly sorted according to size (fist to double-fist sized stones), and the layers' material cannot be explained only as originating from (re-deposited) LPPNB layers. Further studies on these rubble phenomena are extremely necessary, since it has to be excluded that their background relates to the termination of the LPPNB mega-sites. Whatsoever, I expect that due to this geomorphological factor less than 2 % of the mega-sites have been identified yet, and that we have to expect such sites at most of the rich springs along the semi-arid fringes on both sides of the Jordanian highlands (Wadi Araba and Arabian Plateau), and near the springs in the passages between both fringes (*e.g.* es-Sifiya, Ghwair I).

What makes the mega-sites a Mega-Site Phenomenon? It is the hitherto outstanding size, complexity and "uniformity" of the sites that appears to be a hypertrophic event in a restricted geographical context and in time. The "sudden" appearance and disappearance of the sites and their culture makes them an isolated occurrence or phenomenon separated from developments before and after. Of course, this statement may exaggerate historical reality, especially for the zones of neighborly contact with other expressions of LPPNB life (Gebel 2000b: Table 2). So far, however, no serious arguments have been brought up to treat the phenomenon as an ordinary development rooted and dissolving into the overall PPNB trajectory of the southern Levant.

The mega-site social paradigm could have first developed in sites like Wadi Shu'eib and 'Ain Ghazal, where the local MPPNB complexity was swallowed by the developing LBBNB corporate social structures and the new cultural identity of the LPPNB. Wherever the Mega-Site Stimulus met vast grazing and hunting grounds, and arable land, it developed an absorbing momentum in settlement organization, settlement pattern and land use. I expect that it entered the Jordanian Highlands first through the passages cutting the highlands between the Dead Sea and Lake Tiberias, but possibly also south of the Dead Sea (Fig. 1). It has to be examined if MPPNB population pressure could have developed or reached also the (western) highlands southwest of the Dead Sea. It wasn't necessarily through favored palaeoenvironments that a growth stimulus like the one of Jericho was coming from here, but it should not be excluded. Surveys in hydrologically favored areas (spring areas) -taking the aforementioned rubble layer events in account- would help to clarify this important question. However, the expansion of the Mega-Site Phenomenon towards S in the Jordanian Highlands must not have been a long process. There they absorbed the MPPNB sites and culture from 7600/ 7500 B.C. Mega-sites or sites related to the mega-site expansion should be expected at least as far south as Wadi Rum if not further south near Aqaba.¹ Mega-sites north of 'Ain Ghazal are not known yet, but it could be that the first site is known since long (Abu Suwwan near Jerash: Kirkbride 1958).

¹ Villages like 'Ain Jammam attest that the Mediterranean vegetational zone in the Early Holocene extended at least into the Ras an-Naqb - area. It would be not surprising to find mega-sites even between Ras an-Naqb and Wadi Rum in similar environments: the present-day degraded habitats of southern Jordan certainly were preserved in the MPPNB, when the mega-site paradigma "arrived". The soil cover was still intact, and thus the hydrological situation of the habitats was much safer and richer than today, even if we assume a precipitation not higher and better distributed than today.

Territoriality and Aggregation (Table 1)

The characteristics of the mega-site territoriality and aggregation represent a new and complex mixture of specific social, economic, and spatial features, mostly showing corporate structures: corporate structures appear to have been the basic elements of all LPPNB aggregation. Although these new features occurred, it was more the complexity of their combination, which made up their progressive momentum. They added further for the development of early sedentary processes in the semi-arid regions - conditions that played an additional role in the basic changes in human sedentary territoriality. Neither territoriality and aggregation, nor their centrality aspects or their later processes of disintegration (7th millennium BC mobile pastoralism) can be understood as a merely spatial and socioeconomic issue: they are part of the changing human ethology in using space. The LPPNB territoriality and aggregation in the Jordanian Highlands have to be understood as an expression of a hitherto unknown perception of property and symbolic ownership, and a new experience in the concentration and the competition of all forces for structuring and optimizing the exploitation of human and environmental resources in the regional sedentary trajectory.

The mega-site aggregation - aggregation in its widest sense - can be recognized in the following fields¹:

- 1) Socially, aggregation must have developed by means of two corporate processes: the development of extended family structures and the development of chiefdom polities active on local and sub-regional scales. The smaller MPPNB family units appear to have transformed into extended families (kin groups?), providing more social, economic and political security.
- 2) Architecturally, aggregation is attested by terraced² multi-roomed pre-planned domestic units, inhabited by households of extended families. Apart from household/ living, storage and specialized workshop activities especially pronounced seems to be the function of the domestic architecture.
- 3) In terms of subsistence economy, aggregation was supported by intensified storage activities.
- 4) Technologically, aggregation appears in the form of "industrial centers" attested by the standardization of work processes, division of labor into successive technological steps which require different skills. This must have created work hierarchies which, on their part, would have encouraged innovation in the development of chipped blank production, all sorts of stone tools, stone rings, and some types of ornament.
- 5) Demographically, aggregation is attested by constant demographic growth (intra-site) and the geographical expansion of the mega-site lifestyle.
- 6) In terms of exchange, aggregation happened due to the partial overcoming of territorial ties and due to the rising competition through specialization and the sharing of goods, innovations and, most likely, beliefs. Markets of all sorts, material and immaterial, developed with a higher concentration on certain sites, and long distance networks supported the distribution and exchange to an extent not known before.
- 7) Ideologically, aggregation is most difficult to prove for the mega-sites. We have to expect basic changes or developments in various ideological fields, especially in those concerning social, ritual and symbolic practices.

¹ It appears impossible to identify primary causes among the phenomenon's features. Rather, the following factors all simultaneously and contributed by supporting each other.

² Recent research has discussed more of the evidence of architectural aggregation using the vertical space in the mega-sites (Gebel and Hermansen 2001, Kinzel 2003). The current discussion (with M. Kinzel) sees the LPPNB terraced mega-site architecture as a mixture of single- and two-storey as well as split-level room clusters/ houses (*cf.* Fig. 7.A-B, Page 128, this volume).

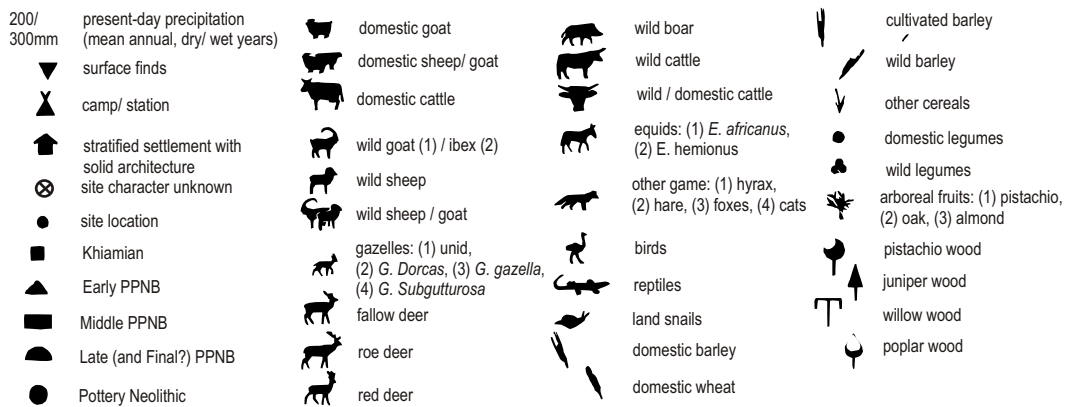
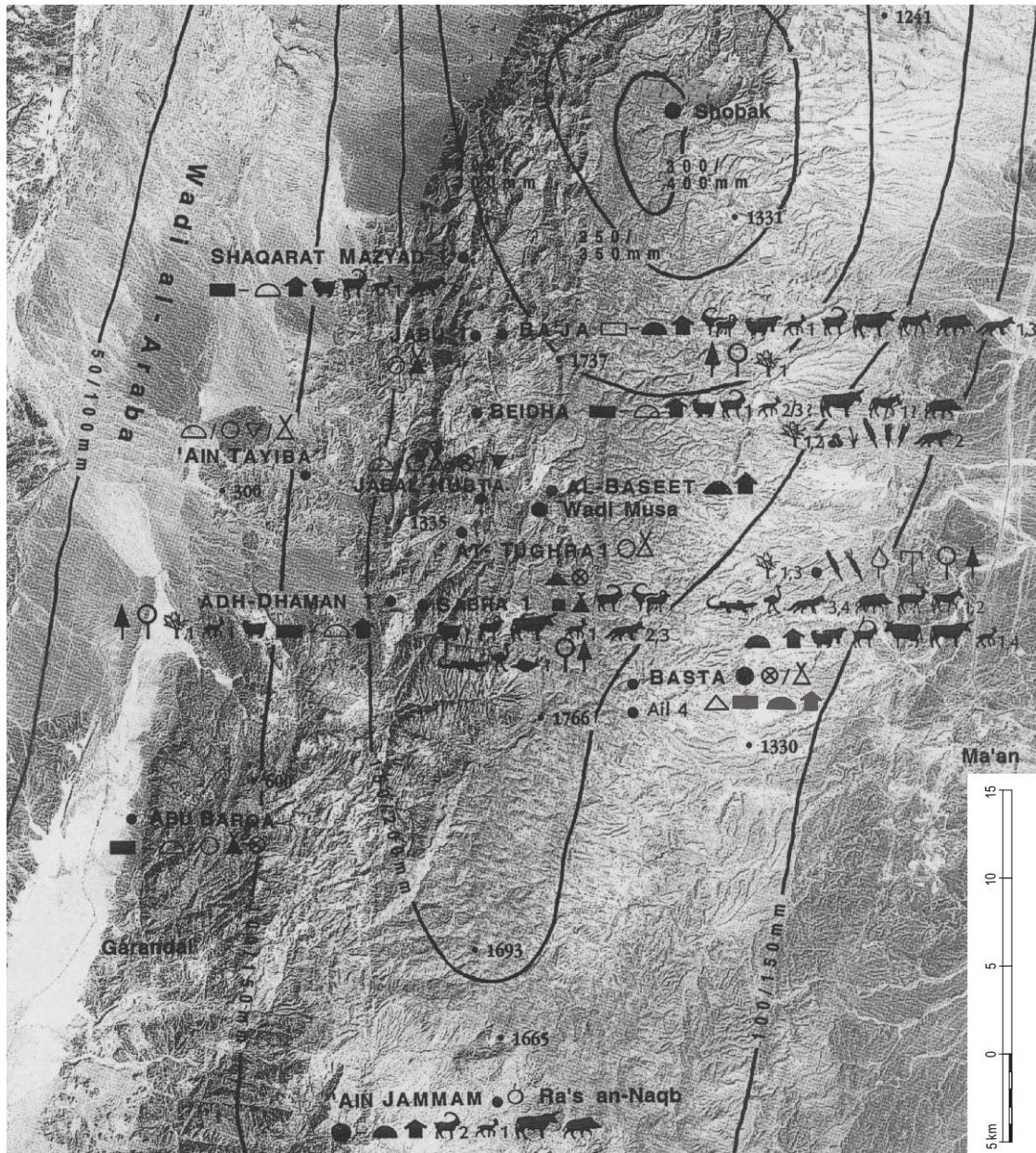


Fig. 2. Subsistence information on Neolithic sites in the Greater Petra Area (after Gebel 1998; data available until 1999; for faunal remains cf. also Söffner 1996).

ad 1) Diversity in regional identity seems to be a basic characteristic of the Mega-Site Phenomenon. This not only applies to the cultural differences we can observe between 'Ain Ghazal, es-Sifiya, and Basta/ Ba'ja/ 'Ain Jammam - although they share the principal ingredients of the distinctive LPPNB cultural substratum -, there also appears to be regional diversity in the type of chiefdom politics (cone-shaped chiefdoms in the N, flat-topped chiefdoms in the south; *cf.* Gebel 2002b).

The societies must have consisted of more or less equally large extended families (kin groups?), which balanced their interests with mutual understanding aided (flat-topped chiefdom) or directed (cone-shaped chiefdoms) by a chief. The power of these chiefs, in the south, could not have relied on (aggressive) institutional forces at this time, but could have been based on associations of shifting alliances within the community. Ritual/ symbolic powers and forces could have aided and controlled a chief's decision-making. For the northern sites (Fig. 1), we cannot exclude the possibility of institutionalized aggressive forces supporting a chief. However, it is hard to believe that the Basta complexity does not represent at least first attempts at building a conical chiefdom.

The MPPNB settlements, especially those in the limited Mediterranean sandstone habitats, could have possibly been prepared for an adaptation to the "arriving" paradigm of corporate structures from the north, since environmental pressures could have demanded new social structures. Corporate exploitation and consumption allow a more successful social management for deficit regions – at least for a while –, under conditions of population and environmental stress. It must have been an attractive solution for the smaller MPPNB families in the sandstone areas, territories whose inhabitants did could expand on the vast steppes of the Arabian Plateau to the east. MPPNB villages like late Beidha (Beidha C) did not function as a competitor to the newly established mega-villages in the region, but rather helped stabilize their establishment by adopting their social paradigm in a very short period of time. If there is any considerable qualitative difference in material culture between the M and LPPNB, it is not hard to imagine that this difference was overcome with little resistance. Corporate family structures helped reduce competitive and thus conflict levels and provided safer living conditions for the individual, at least in the beginning. On the other hand, the more complex social situation in the LPPNB could have later triggered aggression on levels much higher than the small MPPNB communities. More intra- and extra-community aggression must be assumed, as possibly attested by the frequent skull traumata at Basta (*cf.* Schultz *et al.*, this volume; Röhrer-Ertl, Frey and Newesely 1988), or the assumed warfare in the early Neolithic caused by environmental stress.

Social aggregation is also attested by an extended good production and spectrum, a diversification that added for the clear expression of social differences by prestige/ luxury goods.

ad 2) Architectural aggregation is proven by several intra-site features of the mega-sites; territorial competition in the fast-growing communities appears to be the source of the following aggregation principles:

- a) Saving arable land: residential areas near springs prefer to use slope settings devoid of arable soil.
- b) Contraction of horizontal space: the space between formerly isolated domestic units is quickly occupied; this is supported by 1) the terracing of slopes (creation of horizontal building lots - room- or building-wise - allow to optimize space use, especially on very steep slopes, e.g. 'Ain Jammam, Ba'ja, al-Baset, Khirbet Hammam, es-Sifiya, possibly 'Ain Ghazal), and 2) by the gradual abandonment of open areas and lanes (house roofs must have been communal spaces, house interiors were family spaces).
- c) Extension of vertical space: the use of split floor levels and real second floors allowed spatial and social flexibility for restricted land ownerships.
- d) Contraction of domestic groundplans: cellular house plans using very small cells (accessible through ceilings, often less than one sqm.) allowed to optimize the use of space.
- e) "Shifting groundplans": groundplans of houses were steadily reorganized by establishing new room associations through the insertion and blockage of wall openings, adding new walls, or second floors.

f) Aggregation supported by defense structures, e.g. village fortifications or internal terrace walls, remains an open question for the mega-sites. e.g. Ba'ja is believed to be an example for a naturally protected setting, chosen also in order to shelter the inhabitants.

It is striking to see how each of the excavated mega-sites shows additional elements of the LPPNB architecture, rather indicating an architectural expression of local complexity of the human life than only just showing local traditions.

ad 3) Aggregation in subsistence economy is attested by the architectural evidence of (extensive?) storage facilities in the domestic units inhabited by a population now fully sedentary. e.g., the MPPNB round structure villages like Beidha A-B or Shaqarat Mazyad may not have been year-round settlements for all inhabitants (evidence of Shaqarat Mazyad; Bo Dahl Hermansen, pers. comm.). Cellular architecture not necessarily means food storage, especially if such indications mostly were not found in the cells (like in Basta). But it may be argued that among the many sedentary functions a permanent settlement has, storage must be expressed in the groundplans: in the mega-site architecture the cell is the most characteristic room type.

ad 4) Technological aggregation was also responsible for changes in the LPPNB social territories; labor organization and innovation under corporate conditions reached a degree hitherto unseen by the MPPNB. Innovation seems to have been concentrated in workshops operating on sites near the sources of raw material and the distribution centers. Technological or innovation centers developing for specific goods appear to have been common for the mega-site phenomenon. However, it is an ongoing debate if the LPPNB *chaînes opératoires* (event-tree production processes) reflect labor division to an extent that we can speak of a possible outset of social hierarchization through labor. What can be clearly stated about Ba'ja and Basta is that we are dealing with work processes split into various technological stages of production requiring different skills. This is indicated by the flint exploitation and blank fabrication of e.g. Basta (naviform blades, Gebel 1996; Basta has in addition an *ad hoc* chipped stone sector and a household production level), the sandstone ring production at Ba'ja (Gebel *et al.* 1997), and by some of the ornament products on the sites. "Initial Craft Specialization" (Quintero and Wilke 1995) definitely characterizes the near-mine Basta flint production, and is present in most features of the procurement, primary production (blank making), and secondary production (tool making). The specialized flint workshops in Basta might have not been operated by households (as with the family-based sandstone ring production in Ba'ja) but possibly were corporate enterprises, depositing tons of naviform waste outside the residential areas (Gebel 1996). The huge amount of production waste found in Basta reflects a surplus production, which could not only to satisfy Basta's own needs. Basta must have been a factory site and center for the export of bi-directional blade blanks; it benefited from several nearby sources of high-quality flint (Jabal Jthitha near Ail).

The LPPNB diversification of tools is another piece of evidence for the aggregation through progressive craft specialization. Especially if we compare the LPPNB tool kits with the tool production of the following PPNC and early PN, we understand the innovative level reached in the LPPNB mega-sites.

ad 5) Demographic aggregation is the most distinctive feature of the mega-sites; settlement sizes increase 4 - 7 times and show an architectural complexity reflecting a need for flexibility in groundplan organization, and demand for more space (house units of up to 80 sqm. in the groundfloor).¹ This may result from necessities for social adaptation which are related to the emergence of extended family structures and new understandings of kinship. Apart from the many general reasons causing positive population dynamics, one specific reason is related to the mega-site demography: by the growth of corporate structures, most parts of the biological, social and economic life became safer and more predictable, at least as long as growth limits hadn't been reached. The tendency towards a surplus exploitation of natural and human resources by corporate formations must

¹ It is a most important but a very speculative question if the number of settlements also increased from the MPPNB to the mega-site LPPNB. Our impression of a considerable population growth in the LPPNB is based on the extension of the mega-sites, while assuming a similar site density as in the MPPNB. But what if many MPPNB communities dissolved in a few LPPNB mega-sites (*cf.* below)?

have developed in all sectors of production and innovation, including the ideological sectors. New needs and chances emerged through a surplus of manpower, which no longer needed to be devoted exclusively to subsistence needs. I consider this "surplus regime" as one reason for the outset of craft variability and specialization, but also for many other factors of growth, wealth and security: *e.g.* we have to assume more time and care spent on raising the offspring and on reproduction (both human and of the flocks), more individuality invested in innovative processes, more ritual diversification engaged in supporting productive structures, *etc.*

ad 6) Aggregation caused by establishing networks for exchange of ideas and goods helped amplify the centralization of power in most societal and economic sectors and inter-community relations. The division of responsibilities helped create markets for ideas and materials, which regulated and stimulated ties on the local, regional and even long-distance levels. Competition on multiple productive levels would have been an important motor for market developments, and a push towards establishing centralized steering and interest balancing.

ad 7) Ideological aggregation is the most complex topic, since it covers the interrelating spheres of social, economic, ritual, lifestyle concepts, and deals with generally non-material evidence. While it is possible to stick to the material evidence for the aforementioned fields, the interpretations on ideology bear a much higher risk of speculative error and confusion. There are a few sources of evidence for ideological aggregation: The diversified but standardized ornament industries of the mega-sites appear to be a result of more leisure time and the demand for expression of social difference in its widest sense.¹ An intensifying specialization must have increased all levels of individualization, causing and supporting further a ranking among the sites, communal and religious structures (if these can be separated at all for the Early Neolithic), and among individuals. Modern concepts of wealth, social status by ("consumer") goods, direct religious control of individual behavior, *etc.*, may have their origin in this early sedentary aggregation. Especially a growing religious and political complexity and division must be seen as a source of ideological aggregation, resulting in new types of control and aggression which needed to be regulated by higher complexities of power. In this milieu, we must assume a further intensification of power given to external forces - not necessarily ancestors anymore - to aid societal management. We are most probably dealing with a shift in the power ascribed to the dead from the M to the LPPNB; their otherworldly presence seems to have become a sole matter of individual/ family memory². Intra-mural burial practices and house shrines (the latter possibly in es-Sifiya, 'Ain Jammam, 'Ain Ghazal) point towards a higher degree of privacy and individualism in the Mega-Site LPPNB, which may reflect a different concept of the individual established for a limited period.

Settlement Patterns³ (Fig. 3)

Before we discuss the centrality aspects of the potential early Neolithic settlement patterns in the Jordanian Highlands, we should summarize the known settlement history. For the later mega-site regions, we have for now limited evidence for a longer development of campsite oriented territorial ties (Late Natufian to the Khiamian/ EPPNB, 12000-8800 BC) preceding the territorial behavior characteristic for the sedentary village life of mega-sites. It is not clear at all how the shift in social

¹ While in previous periods we have been dealing with "everywhere types" produced or imitated at many places, in the Mega-Site LPPNB we are dealing with products manufactured on a mass scale in certain workshops (sites), possibly representing regional "fashions". This characteristic affected the diversification and standardization of tools, *e.g.* those of Basta: the decline of the ornament industries in the lower rubble-layers above LPPNB Basta is reflected in the blank and tool technologies of the mobile FPPNB Bastians (restricted tool set, a clear - though late - vanishing of the "industrial" bi-directional techniques).

² We emphasize that the family burials of *e.g.* Ba'ja (or the individual burials in Basta) were subject of steady intra-mural clearing and discarding.

³ This section of the contribution has been revised in parts after the results of the 2000-2001 seasons at Ba'ja. I am indebted to Bo Dahl Hermansen for discussing and sharing his new ideas on hierarchical elements recognized in the LPPNB settlement patterns in the Greater Petra Area. Since this area is best known for its site density, my arguments for the LPPNB settlement patterns and centrality features rely on the evidence from there. This can only provide a direction of interpretation for other regions of the Jordanian Highlands, where other factors may have played a role in the formation or lack of centrality features.

organization from late hunter-gatherer bands to the E?-MPPNB nuclear family- dominated society (8800-7800? BC) living in round structures took place. There is no evidence yet for an independent or autochthonous local emergence of core family structures from the bands substratum in the Jordanian Highlands, and all evidence here points at the existence of late foragers in the 10th millennium BC, and even until the early 9th millennium BC, in some arid regions until the end of the 9th millennium BC and after. We have to expect the co-existence of the earliest sedentary communities with foragers still following a seasonal life, and a regional variability in such patterns. The early MPPNB with its round houses is ill attested in the Jordanian Highlands (only Beidha, Shaqarat Mazyad, 'Ain Abu Nukheilah), too, and it is still difficult to understand the background of the socio-architectural development behind the regional shift from the round to the rectangular architecture in the MPPNB. To my knowledge, only the Beidha sequence might help approach this question.¹ However, Beidha points out that round architecture in the Jordanian Highlands must have co-existed with areas already having rectangular architecture along and beyond the western Rift Valley.

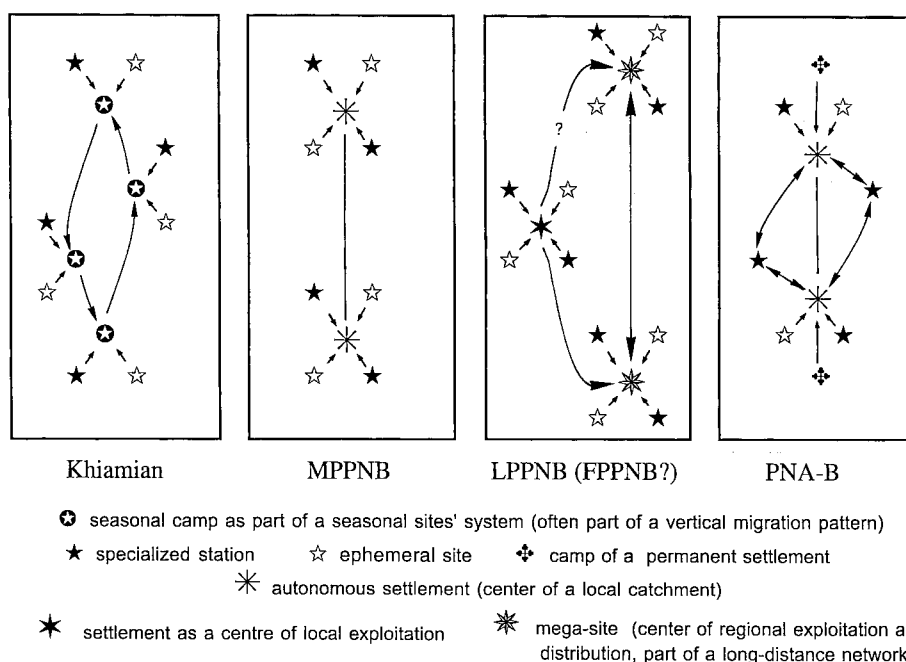


Abb. 3. Reconstructed development of the Neolithic settlement patterns in the Jordanian Highlands: the example of the Greater Petra Area (shown are the smallest units/ neighborhoods).

As stated above, the local catchment-confined development of the MPPNB settlements is considered to have been absorbed by the "arriving" mega-village social organization and its economic background, needs, technological know-how, and ideologies. Especially the limited habitats of the sandstone environments of the south are supposed to have caused territorial stress and a demand for regulated relationships in- and outside the settlements and settlement patterns. This could explain one reason for the choice for the location of Ba'ja². The new settlements did not necessarily use MPPNB localities: it rather seems that the combination of the aforementioned environmental conditions was chosen, leading to new foundations like Basta, 'Ain Jammam, es-Sifiya, Wadi al-Hammeh, Ghwair I,

¹ The MPPNB date of adh-Dhaman (west of Wadi Sabra, south of Petra; Gebel 1988) has never been discussed seriously; the present author followed D. Kirkbride (1966) in her dating the site to the MPPNB, since the finds from the site survey in 1983 (Gebel 1988) delivered no contradicting arguments. The querns are typical for the MPPNB, and of the same type like in Shaqarat Mazyad, Ail 4 (near Basta) and Beidha. Some LPPNB arrowheads, as known from the surface of Shaqarat Mazyad, and the rectangular architecture of adh-Dhaman (attested also in Ail 4) would date the site to the later MPPNP, at least.

² cf. now Gebel 2001, 2002b.

and possibly al-Baset. MPPNB localities not providing these conditions to a satisfying degree were absorbed by the new sites (e.g. Beidha by Ba'ja¹), MPPNB localities providing these conditions were transformed into such mega-sites (e.g. MPPNB 'Ain Ghazal by LPPNB 'Ain Ghazal).

The economic and social strength of the mega-sites triggered more and more rapid growth and transformation into increasingly complex structures in all sectors of community life, technology, demand for goods, *etc.* Villages not being mega-sites by size, related their socio-economies to these regional motors through exchange and territorial arrangements. Meanwhile, in the later part of the process, which could have been more like a process of "acculturation" in the beginning, we should be able to see the regional birth of simple hierarchical settlement patterns with a mega-site as a center and one or two satellite settlements. al-Baset and Ba'ja, Basta and LPPNB Ail 4 would be such systems.

The post-LPPNB, respectively the first half of the 7th millennium BC is a problematic period in terms of settlement history. There seem to be areas of occupational continuity ('Ain Ghazal, Wadi Fidan, 'Ain Jammam), while others show squatter occupations (Basta), or an abandonment of permanent occupation (Ba'ja). It is obvious that Ba'ja transformed into campsites like Ba'ja V, found at the entrance of Siq al-Ba'ja² and yielding the typical pre-Yarmoukian arrowheads and a more limited set of tools (similar material was found in the lower rubble layers above the LPPNB architecture of Basta).

The "gap discussion" or whether there was a hiatus in settlement history after the LPPNB: Unfortunately, there are arguments both for and against such a phenomenon; it has not yet been carefully considered if such a feature exists in certain regions, while remaining absent in others. Some argue against a gap from a local perspective (e.g. Z. Kafafi on the 'Ain Ghazal case, this volume), others claim that the "gap" (*hiatus palestinienne*) is just a research fiction. e.g. Ted Banning (pers. comm.) argues against a gap, and explains on the basis of his Wadi Ziqlab research how a shift in settlement pattern combined with geomorphological factors, survey biases and problems with radiocarbon date calibration can account for the resulting impression of a hiatus between the LPPNB and the Yarmoukian (now, of course, filled in some areas by PPNC).³

If there isn't a general collapse of the mega-sites in terms of their permanent occupation, we can at least observe a cross-regional collapse of mega-site socio-economies. This collapse could not have been caused by a single influence, e.g. from the environmentally sensitive fringes in the southern expansion area of the mega-villages. It could also not have been caused merely by deserted, environmentally sensitive links within this chain of sites, which directly reacted to an (assumed) climatic change towards the worse (*hiatus palestinienne* approach of explanation) around 6900 BC. The collapse of the mega-site socio-economies could also not have been initiated primarily by local man-made environmental disasters (wood harvesting, monocultures, overgrazing, *etc.*). What if such locally relevant causes acted in combination within a much larger framework, which was formed in the end by weakened hybrid socio-economic structures? What if this more or less sudden collapse had resulted from a social implosion starting from some major mega-sites, whose rapid growth could not find the social answers fast enough to secure the dynamics of growth (kind of domino scenario)?

¹ although Ba'ja has to be considered as a very special case: It could neither grow spatially beyond the ordinary MPPNB settlement size known from the area, nor did it had a direct access to vast steppe environments. Ba'ja is perched precariously on a sloping intramontane plateau, overlooking a narrow *siq*, or gorge. It is only accessible through this gorge, which can be as narrow as 0,5 to 1,0 m and as deep as 70-80 m. No other early sedentary community in the Old World is known to have been located in such a remote and isolated setting. Why would early agriculturalists have chosen to settle in such a shielded and dramatic location? Our current discussion claims that several reasons came together for the choice of the place: the need for protection because of conflicts between neighboring communities over food resources (environmental stress), favorable water storage conditions in the Siq al-Ba'ja (Gebel, in prep.), protection of wealth created by the export of luxury products (Ba'ja's sandstone rings), and a "symbolic and psychological significance" of a protected location reachable through a channel-like access.

² I thank H.D. Bienert and D. Vieweger for reporting the site to me.

³ Ted Banning argues further: "In fact, I also object to the term "PPNB collapse", as I view the change at the end of LPPNB simply as a shift in economic and social priorities, not a collapse with all the derogatory implications that word has."

Table 1. Criteria assumed to have supported aggregation and centrality of the Mega-Site Phenomenon.

	general	chiefdom level	family level	settlement level
political	processes of absorption and adaptation of/ by the vernacular MPPNB socio-economic traditions by the arriving mega-site paradigm; concentration of political forces in certain settlements functioning by corporate political structures on communal. (settlement organization), family, and production levels; regional diversity in political structures and identities	development of chiefdom polities active on local and sub-regional scales; political decision making is centralized by chiefs steering/ regulating communal matters by either balancing group interests through helping alliances/ mutual understanding (flat-topped chiefdoms) or being (conical chiefdoms) supported in this by institutionalized or non-institutional forces; role of a chief's ritual competence not clear, possibly ritual authority assisting/ correcting chief policies; decision making relevant for the individual (mega-) site sphere only (whether local or sub-regional), while smaller settlements can get allied in certain domains with mega-site policies	development of corporate intra- and inter-family relations/ structures (extended kin families), supported/ regulated through political decision making on the chiefdom level; likely is the emergence of "leading" families; intra-communal "survival" of families is bound more than before to their adaptation to the communal political order	organization of space/ property awareness became a political issue more than before; increased aggression potentials between the larger family units
socio-economic, technological	constant demographic growth and "surplus regimes" in procurement, exploitation, and production modes; emerge of "industrial" and distribution centers; standardization of production processes (certain products only: labor division, initial craft specialization) result in work hierarchies, innovation pressure, "work value", surplus production/ offers, creation of markets/ good demands	steering/ regulation of social decision making; central care about a settlement's economic integrity and wealth; balancing of economic interests becomes a factor of power stability and conflict management	corporate extended family structures (kin groups?) provide more social and economic security for the family and individual (than in the previous nuclear families): a high degree of sedentary exploitation enforces storage activity, activates innovative forces, allows more time for cultural expression and health care (lower mortality rates?); needs of corporate mentality trigger labor division and specialization in crafts	distribution knots and/or market centers for specific goods or other offers occur, active on sub-regional, regional (and inter-regional?) levels; settlement subsistence economy is based on large and independent households with an intensified storage sector
ex-change	overcoming of territorial ties in terms of good and innovation exchange, exchange of ideas; rise of competition between settlements offering the surplus products	chief active in protecting/ controlling markets/ good exchange; material and immaterial exchange becomes a factor of conflict management between sites	traders or trader families could have established; steering/ influencing economy and ties beyond personal levels	settlements become distribution knots and/or market centers for specific goods or other offers; material and immaterial exchange becomes a factor of conflict management between families
ideo-logical	ideological aggregation through political and religious division and complexity; corporate identities help to establish new perceptions/ concepts of power, aggression management, individuality, social status, property, etc.; intensification of power given to external forces to aid societal management?	chiefdom is ideologically supported by ritual and symbolic concepts and powers		communal ritual centers?

Basta did not provide any evidence for an environmental or subsistence disaster¹ or a technological decline (Gebel 1996), on the contrary. We have more evidence for a flourishing community until its end, and for its role as a distribution center (blade blanks). Social disturbances and conflicts occurring in a society developing from a flat-topped to a conical chiefdom may have triggered more grave impacts on the distribution networks and thus emerging hierarchical settlement patterns and long-distance exchange than did environmental causes; environmental adaptations towards pastoralism, however, seem to have started anyway in the LPPNB, and finally got the way out from the mega-site development.

The LPPNB agglomerated settlements were replaced in the Jordanian Highlands by the Late Neolithic "dendritic or dispersed settlement systems with many small hamlets and farmsteads extending up- and downstream from somewhat larger villages (though still not as large, generally, as LPPNB ones) that served as central places for ideology, social functions and perhaps some political-economic functions" (Ted Banning, pers. comm.). Along the western Rift Valley these larger PPNC-PN villages may well have reached the size of mega-sites. The corporate structures of the LPPNB, however, apparently disintegrated into pastoral and more heterogeneous social structures characteristic for the PPNC-PN permanent village life.²

From 1999 it becomes clear, through the finding of the mega-site of al-Baseet/ Wadi Musa ('Amr, this volume) and the recent insights from the Ba'ja excavations, that we should consider the emergence of hierarchical settlement systems in the LPPNB in areas which provided the potential for a larger choice of productive sectors. The Greater Petra Area with 8 very different physiographic units within a W-E range of approx. 40 km (Gebel 1990) is such an area. The variability of habitats would allow the coexistence of several adaptations and socio-economic paradigms, including remote foraging groups. Large mega-sites co-existed as neighbors (al-Baseet and Basta are at a linear distance of *c.* 14 km), and communicated along a route network connecting the spring areas on the eastern flanks of the escarpment. The economies of Ba'ja, Basta, al-Baseet, 'Ain Jammam, Ghwair I, *etc.* must have been in contact, since material and technologies of the neighboring sites are represented in each other's material culture. Fig. 3 offers a summary of the potential settlement pattern evolution for the Greater Petra Area, which might also be taken as a model for regions with a similar succession of palaeo-habitats in the Jordanian Highlands³.

For the LPPNB Greater Petra Area, we do not expect a hierarchical settlement pattern in the LPPNB as understood by the "central place theory". The hypothesis is that we are dealing with an "anodal" system, in which fast-growing and self-sufficient settlements are connected by exchange; they are otherwise independent and rather self-sufficient in terms of their basic subsistence needs (Fig. 2). Each of them was central in the sense of being the local or sub-regional focus of land-use, exchange of goods and ideas. Our current insights exclude the possibility of true subordinate settlements for Basta or 'Ain Jammam, al-Baseet. More a smaller settlement was associated to a larger (mega-) site by sharing interests in exchange. The smaller sites controlled the niches of their catchment areas alone. The semi-arid ecology probably also excluded chances for the development of real satellite sites. What is true for the ecological niches, may have been also the case for other sorts of niches (certain goods, innovation). These centers may have developed a size, social complexity, and institutions, which deserve an interpretation beyond the understanding of a village (*cf.* Footnote 2 on Page 2). By the end of the LPPNB, an economic specialization and re-structuring in the use of the ecological and other niches had started, disturbing established needs and inter-site exchange and leading to a settlement pattern resembling more the MPPNB level of settlement hierarchy (Fig. 3).

¹ Becker (2000) has not found any faunal evidence for environmental stress that can be related to *the hiatus palaestiniensis* arguments or any other argument for Basta's end. However, the open juniper forests (Neef, this volume) that once must have crossed the escarpment and penetrated into the Irano-Turanian Basta environments remain an assumption.

² Since then, societies in the Jordanian Highlands have shown this dualism in societal organization (pastoral and sedentary structures), even until modern times (Gebel 2002b).

³ Other mega-site settings without a large variety of biotic and abiotic resources may not have tended to develop a structured or hierarchical settlement pattern, which could be assumed for *e.g.* es-Sifiya. However, other conditions of growth, *e.g.* external ones like an involvement in all sorts of exchange/ trade, could have played a role here.

However, the "flat" LPPNB settlement pattern hierarchy in the south of the highlands must not necessarily have existed in the north.

Smaller permanent centers like Ba'ja were "rural" centers that existed aside the main corridors along the edge of the Arabian Plateau and the Wadi Araba. They already must have flourished to a considerable degree through their participation in the mega-site exchange network of these main corridors (Ba'ja is situated near an E-W connection through the sandstone area between these two major corridors.). There is evidence that Ba'ja was a part of the exchange network, but there is no evidence suggesting any sort of control on Ba'ja by the mega-sites, which would mean that we are dealing with a true two-level hierarchical settlement pattern. But it cannot be excluded that sites like Ba'ja were on their way to get absorbed into such a simple hierarchical settlement pattern - thoughts that are reflected in the contribution of Bienert (this volume, Page 21ff.)

Central to What? A Discursive Answer to the LPPNB Centrality Issue

For the late 8th millennium/ early 7th millennium BC, larger settlements are also known from the areas outside the southern Levant; "site gigantism" appears not to have been a feature of the LPPNB Jordanian Highlands only. *e.g.*, we may expect extensive sites in the LPPNB/ EPN (Early Pottery Neolithic) of the Ghouta, the Jordan Valley, the Middle Euphrates, or parts of central and southeastern Turkey. Especially the EPN of the Jordan Valley and of the alluvial lands suitable for irrigation is a time/ are areas in which mega-communities existed to an extent not yet observed. LPPNB mega-communities may have developed at different spots in the Near East, and the Jordanian Highland paradigm should not be considered the only place of origin. I rather think that the mega-communities are a poly-regional feature of the LPPNB/ EPN, of which only a few survived. However, the obvious Mega-Site Phenomenon of the Jordanian Highlands made centrality and aggregation a question for all the Near Eastern Neolithic regions. Centrality questions for the sites outside the Southern Levant were either neglected or remained unresolved, since the *Central to What?* issue could not be approached with a sufficient amount of data. Thus an Early Neolithic origin of central places hardly gained floor for discussion.

Another reason why centrality was not a topic in Early Near Eastern Neolithic research could be its sole understanding (and definition) within the framework of historic settlement hierarchies: But: the centrality features of the Mega-Site Phenomenon may add now arguments against a solely hierarchy- bound understanding of settlement centrality.

As of yet, we have no clear evidence for LPPNB hierarchical settlement patterns from the few regions known better in the Jordanian Highlands or west of the rift. As argued above, even systematic surveys devoted to the question would deal with geomorphological reservations. However, evident centrality features (Table 1) of the mega-sites demand an understanding of their nature, and some reconsideration on whether they may represent the outset of hierarchical structures in settlement patterns, as known from later periods.

In his contribution to this volume, Gary Rollefson suggested the existence of "stand-alone" settlements that might have been "town chiefdoms", having had at the utmost "satellite settlements that haven't been found yet." This exactly describes the overall impression we have gained of the mega-site evidence, which has also led to the title of the symposium: *Central Settlements in Neolithic Jordan*. Our research also supports the notion (G. Rollefson, this volume) that we might be dealing with a settlement (pattern) concept which remains unique for the Near Eastern settlement history, a stand-alone paradigma that was halted by its own development, and did not develop further as in other regions, where central places in a multi-level hierarchical web of subordinate settlements and stations developed.

The core question related to the mega-site LPPNB centrality in the Jordanian Highlands, whether we are dealing with a centrality based on a supporting system of satellite settlements, stations and ephemeral sites, or not, appears obsolete. The question is more about if "centrality without periphery" ("*Central to What?*", "stand-alone settlements") can be a concept of understanding the

phenomenon we are dealing with. And, if centrality without a supporting periphery is centrality at all? These questions are the framework in which the LPPNB centrality problem needs to be discussed further.

The Mega-Site Phenomenon with its outstanding features, especially its centrality and aggregation aspects, demands explanatory frameworks and interpretative approaches beyond the standard "trajectory thinking" in the discipline. It proves that we are little prepared to interpret developments outside the general evolutionary trends we know from the Near East, and that unidirectional or monocausal explanation often rules the understanding of what really had a the polycentric and complex nature in the early Near Eastern Neolithic processes.

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