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## Local and External Relations in the Levantine PPN Period: ‘Ain Ghazal (Jordan) as a Regional Centre

### Introduction

More than 150 Pre-Pottery Neolithic (PPN) sites have been identified in Syria, Lebanon, Palestine and Jordan (Gebel 1984), an area of the eastern Mediterranean that encompasses more than 350,000 km<sup>2</sup>. It has long been recognized that the Levant has constituted a greater PPN ‘culture area’ (e.g. Moore 1979: 1), and Moore’s synthesis of the available data revealed several cultural themes that were repeated throughout Levantine sites in the late 8th and 7th millennia (Moore 1979). On the other hand, Moore’s descriptions also indicated considerable diversity in the material culture inventories, and this variability undoubtedly reflected the contemporary linguistic and ethnic differences that must have existed within so large a geographic expanse.

In his preliminary report on the excavations at Tell Abu Hureyra in northern Syria, Moore described the site as a ‘regional centre’ (Moore 1975: 69) in view of its large size that contrasted distinctly with contemporary sites in the area. The term invokes spatial, ecological, and cultural concepts entailed in human geography studies (cf. Haggett *et al.* 1977). While the archaeological record for the aceramic Neolithic is still too poorly documented to satisfy the rigorous methodologies of locational analysis (e.g. Hodder and Orton 1976; Johnson 1977), the conception of the eastern Mediterranean as a set of interacting regions of local cultural variability is still a useful idea to pursue on a general level.

It is a basic principle that human populations are not distributed equally and at random over a given area, but instead population distributions tend to occur regularly in a hierarchy of small, medium, and large settlements (Haggett *et al.* 1977: 110 *ff.*). Although the data on settlement sizes are scanty, this appears to be borne out for the PPN of the Levant where the rank distributions given in Table 1 can be discerned.

The large site in Anatolia is Çatal Hüyük (12.5 ha) and the medium-sized site is Asiliki Hüyük (7.0). In Syria only Tell Abu Hureyra is larger than 10 ha (11.5), but three sites rank in the medium category: Ras Shamra (8.0), Ghoraife (6.0), and Tell Aswad (6.0). In Palestine and the Jordan Valley, Khirbet Sheikh ‘Ali is cited as being 10 ha in size (Gebel 1984: 88), although this may be an exaggerated figure for the PPN period

Table 1 Rank distribution of settlement sizes reported from Anatolia and the Levant (based on Gebel 1984)

Region	Small (0.1–5 ha)	Medium (6–10 ha)	Large (More than 10 ha)
Anatolia	5	1	1
Syria	7	3	1
Palestine and Jordan Valley	6	1	2 (?)
Highland Jordan	5	—	1

occupations. Of the two large sites indicated in TABLE 1, Moore notes that the c. 12 ha area for Beisamoun is probably misleading since the entire site was probably not occupied simultaneously (Moore 1979: 231–232). The other potential candidate for large rank is the PPN site at the Wadi Shu‘eib Bridge (Zeuner 1957: 23); a recent reconnaissance suggests it may rival ‘Ain Ghazal in size (D. McCreery, pers. comm.). In highland Jordan, the only large population concentration is ‘Ain Ghazal which exceeds 12 ha in extent.

Based on these admittedly incomplete figures, then, it would appear that there might be a minimum of three regional centers in the Levant located in the general regions of Syria, Palestine and the Jordan Valley, and highland Jordan.

### ‘Ain Ghazal

The occupational history of ‘Ain Ghazal has been investigated over four seasons of excavations directed towards the ‘rescue archaeology’ of parts of the site severely damaged by highway and commercial construction (Rollefson 1984a; 1985; Rollefson and Simmons 1985; 1986; n.d.a). Seventeen radiocarbon dates document the events of the late 8th and 7th millennia, and other samples are now being processed to broaden the chronological framework of the habitational episodes that include the PPNB (7250–6200 BC), a ‘Final PPN’ or ‘PPNC’ phase (c. 6200–?5800 BC), and a later Yarmoukian phase (?5400–?5000 BC) of the early ceramic Neolithic.

The village of ‘Ain Ghazal began as a small- to medium-sized settlement at about 7250 BC. During the earliest part of its history, long distance contacts are demonstrated in a number of ways. Basalt used for grinding stones was obtainable no

closer than the Mafraq area some 35–40 km to the northeast. Asphalt probably derived from seeps along the Dead Sea shore, and sea shells came from both the Mediterranean and Red Seas. Minerals used for jewelry were both locally available and exotic, the latter including 'greenstone' which may be copper ore from the Wadi Dana area of southern Jordan, carnelian from the sandstone formations in Wadi Rumm, and possibly coral from the Red Sea. The origin of the green diopside crystals used to highlight the eyeliners on the statuary (Tubb 1985: 119–121) is not known. Obsidian artifacts, including a broken knife (Rollefson *et al.* 1984: FIG. 3e), reflect an Anatolian connection.

However, while this evidence of 'external' communication is well demonstrated, 'Ain Ghazal was not very different in this respect from other sites such as Jericho (e.g. Kenyon 1979; Kirkbride 1960: 116) and Beidha (Kenyon 1966: 51–53). Nor was 'Ain Ghazal much different in size from these two sites: until the mid-7th millennium 'Ain Ghazal did not exceed four to five hectares in area.

But at approximately 6500 BC, 'Ain Ghazal experienced a dramatic expansion, reaching more than nine hectares in extent in a relatively short time, and by the end of the 7th millennium the village had grown to more than 12 ha, including enclaves on the east bank of the Zarqa River and on the north bank of the Wadi Fakhit just to the northwest of the main village.

Another major change occurred at 'Ain Ghazal shortly after 6200 BC, and while there is no apparent gap in the occupational sequence, there is a major alteration in the character of the archaeology that signals a decided break in the cultural continuity of the residents. The areas which are of fundamental importance in contrast with typical PPNB counterparts include architecture, subsistence base, chipped stone tool manufacture, and human burial methods (and associated ritual practices) (Rollefson and Simmons 1986; Köhler-Rollefson *et al.* n.d.; Banning and Byrd n.d.). During this 'Final PPN' or 'PPNC' period of unknown length, the site grew to its maximum size. At the present time no comparable evidence of cultural change is known from the southern, western, or northern areas of the Levant. On the other hand, it is possible that it is during this time that the eastern and southern regions of Jordan witnessed an increased focus of human exploitation, based on 1) the appearance of onagers at 'Ain Ghazal (Köhler-Rollefson *et al.* n.d.), 2) comparable emphases on burin configurations at most of the desert 'burin sites' (Betts 1982; Rollefson and Frohlich 1982; Rollefson and Muheisen n.d.) and at Wadi Dhobai Site B (Waechter and Seton-Williams 1938), 3) on a mid-6th millennium radiocarbon date from a settlement east of Azraq (Betts, pers. comm.), and 4) several aspects of the material from 'Ain Abu Nekheileh in Wadi Rumm (Kirkbride 1978: 9).

#### Regional cultural variation

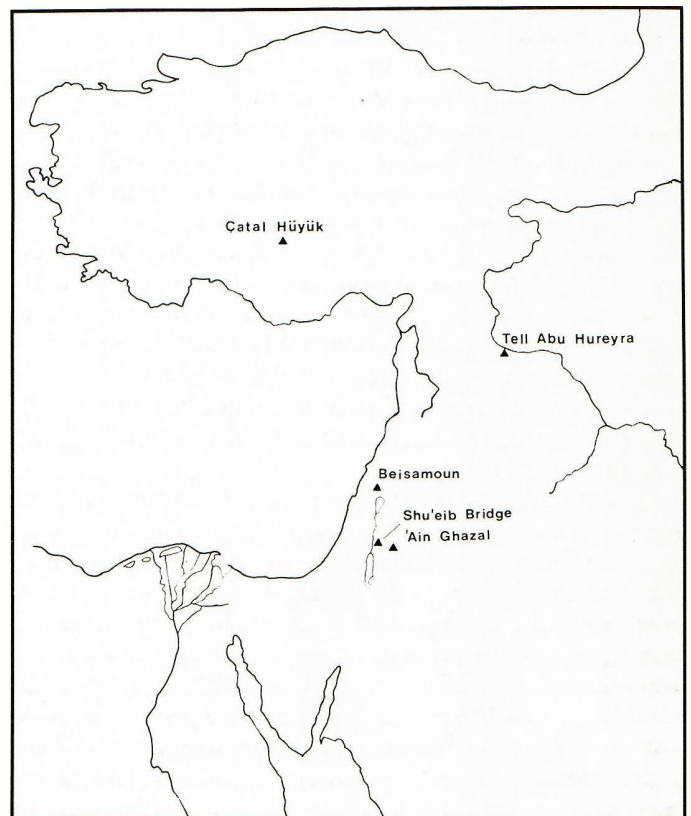
Limited space does not permit a detailed delineation of the various facets of material culture variability in the Levant,

but some appreciation can be obtained elsewhere (e.g. Moore 1979; Cauvin 1974 *vs.* Bar-Yosef 1981). Instead, only a few examples will be mentioned to illustrate briefly the kinds and degrees of the regional clustering of cultural manifestations that characterize the Levant.

At the outset, it might be recalled that cultural similarity is associated with temporal and spatial dimensions such that two nearby sites occupied at the same time are more likely to reflect cultural homogeneity than sites separated by great distances and/or periods of time. This basic archaeological tenet holds up well in the Levant, although ecological circumstances affect some aspects of culture more vividly than others, particularly in the realms of subsistence economies and architecture.

PPNB rituals demonstrate this concept very well, especially since rituals have very strong ethnic implications. Despite the widespread phenomenon of subfloor, flexed, decapitated burials that are found throughout the Levant, for example, the plastered 'portrait skull' practice is known from only four sites: Jericho, Beisamoun, Ramad, and 'Ain Ghazal. Human and animal figurines are also found consistently throughout the Levant, but the extravagant detail of fertility figurines at 'Ain Ghazal (McAdam in Rollefson *et al.* 1985) is so far unmatched in the Levant, although close parallels of some other human forms are known (e.g. Perrot 1966).

1. Location of major Pre-Pottery Neolithic sites in the Near East that are larger than 10 hectares in extent.



Perhaps the greatest excitement in recent years has been generated by the discovery of the unusually well preserved ritual paraphernalia from Nahal Hemar to the west of the southern end of the Dead Sea (Bar-Yosef 1985) and the three caches of human statuary from 'Ain Ghazal (Rollefson 1983; Rollefson and Simmons n.d.a.). The uniqueness of the painted stone masks and skulls adorned with asphalt at Nahal Hemar argues very strongly for fundamental ethnic variation in the southern Levant, since preservation problems alone cannot explain the absence of similar objects elsewhere in the region.

The similarity of the 'Ain Ghazal statuary with the fragmentary remains unearthed at Jericho (Garstang 1935) in terms of basic construction techniques (Amiran 1962) demonstrates a degree of religious/iconographic integration between the two sites separated by only some 50 km. But despite the proximity of the sites and the close correspondence of technological features, details of form, style, and cosmetic decoration suggest that local canons of religious expression held significant sway (compare Garstang 1935: Plate LIII with Rollefson 1984b: FIG. 5). On the other hand, the 'Ain Ghazal statuary came from late 8th millennium (older than 7100 BC) and early 7th millennium contexts, while it appears that Garstang's finds are from the end of the PPNB sequence at Jericho (Garstang 1935: Plates XXV and XXVI; cf. Kenyon 1981: 267–268). Thus the evident differences may be the result of temporal developments rather than contemporary variation.

Basic architectural designs and decorative detail also reveal some primary differences among PPNB Levantine sites. The use of stone *vs.* mudbrick as the basic construction material is directly related to the availability of the former, and the use of one or the other resource will entail limitations on what can be erected. But this environmental constraint cannot explain the singular architectural arrangements at Beidha II–VI (Kirkbride 1966), nor why the internal arrangement of rooms at 'Ain Ghazal is linear (Banning and Byrd n.d.) compared, for example, to the internal diversity seen at Bouqras (Akkermans *et al.* 1983). In terms of decorative elaboration, the use of red ochre is common throughout the Levant, but Abu Hureyra is the lone example for the utilization of a black pigment for interior embellishment (Moore 1975: 60). At 'Ain Ghazal, red ochre was 'finger painted' as parallel and sub-parallel lines and 'commas' on house floors, but similar styles have not been reported anywhere else in the Levant (Rollefson and Simmons 1986; n.d.a.).

As a final example, although it is not intended to indicate an exhaustion of the kinds of regional variability, the occurrence of white ware (*vaisselles blanches*) in the Levant is generally considered a very late aceramic development confined primarily to the northern half of the PPNB culture area, with rare reports of the presence of such material elsewhere, for example from Wadi Shu'eib (Mellaart 1975: 63) and Munhatta (Copeland 1969: 90). The substantial presence of white ware in early and mid-7th millennium contexts at 'Ain Ghazal antedates the Syrian and Lebanese examples by at least several centuries (Kafafi in Rollefson *et al.* 1984: 175–178; in Rollef-

son *et al.* 1985), suggesting a southern center for the establishment of this tradition that diffused northward or was redeveloped independently.

### Concluding remarks

While many of the thoughts presented above are on a very general level of abstraction, and the cited examples are based on incomplete and statistically suspicious data bases, it nevertheless appears to be true that the PPNB 'culture area' was composed of a number of regional entities sharing several basic cultural foundations but which were internally quite distinct from each other.

It is not possible on the basis of the available information to estimate how many regional cultural units existed, but it might be offered here that the number was probably larger than the three or four suggested by large sites of Tell Abu Hureyra, Beisamoun, Wadi Shu'eib, and 'Ain Ghazal.

Nevertheless, these postulated regional cultures did not exist in isolation and develop independently of other geographically bound groups. Direct and indirect communication across regional boundaries occurred throughout the PPNB period by means of which both objects and ideas were exchanged in many directions. The larger sites in each region, such as 'Ain Ghazal, served as focal points for the development of local innovations and as centres for the diffusion of new concepts and technologies.

It is hoped that the recent acceleration of Neolithic research in Jordan will provide timely and detailed results to add more resolution to the problems alluded to earlier, and that comparable progress will be generated in the neighboring countries of the Levant.

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