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Margin or Centre? The Epipalaeolithic in the Azraq Oasis and the Qa' Shubayqa

Tobias Richter

In this contribution I consider the meaning and applicability of the concept of marginality in the context of the Epipalaeolithic of the Azraq Basin. Looking back at our work at the early Epipalaeolithic site of Ayn Qasiyyah and at the ongoing work at the late Epipalaeolithic site of Shubayqa 1, I argue that palaeoenvironmental and archaeological evidence now allow us to make the case that this currently arid region was by no means a marginal zone during the late Pleistocene.

Introduction

Although it was, of course, not clear to me at the time, my involvement with the Epipalaeolithic of the Azraq Basin began when I first met Gary Rollefson at the American Centre of Oriental Research (ACOR) in Amman in the summer of 2003. I was introduced to Gary by another ACOR fellow and pretty quickly I was invited on a forthcoming trip to the Azraq Oasis with Gary. So, a few days later I found myself standing in the dried-out, shallow depression that used to be filled with the water of the Ayn Qasiyyah spring, staring at a crumbling sediment profile at the edge of the pool and listening to Gary's recollection the Azraq Wetlands Survey three years earlier (Rollefson *et al.* 2001). Had I known at that point, as Gary pointed out the 40–50 cm -thick, dark palaeomarrow deposit that was densely packed with chipped stone artefacts and faunal remains, that I would be excavating that very site as part of my PhD research a little over two years later, I would probably have paid a bit more attention! Instead, I was preoccupied with drinking enough water to stay hydrated in the intense heat of the Azraq summer and wondered what could possibly be so interesting about this unremarkable-looking site. Despite this initial lack of enthusiasm, when Gary, Leslie Quintero and Philip Wilke suggested that I work at Ayn Qasiyyah as part of my PhD project I jumped at the opportunity and have worked in the Azraq Basin ever since. Like many others, I am grateful to Gary, as well as Leslie and Phil, for giving me the opportunity to work on one of the many sites that they discovered, and for Gary's advice, feedback and help since then.

Given Gary's start-up help it is appropriate, I think, to talk a little bit about the Epipalaeolithic periods at Ayn Qasiyyah and in the Qa' Shubayqa and how they might fit into the broader picture of the prehistoric sequence

in eastern Jordan and the Levant as a whole. It has to be said that the Epipalaeolithic is not one of those periods that has particularly interested Gary in his long career, although he has, of course, found and described numerous late Pleistocene sites, and also excavated at a number of them (Bawwab al-Ghazal comes to mind). His primary interests have been focused on the two opposite extremes of prehistory: the Lower Palaeolithic and the PPNB to late Neolithic. Despite this I will focus predominantly on the Epipalaeolithic of the Azraq Basin. While the work at Ayn Qasiyyah is now nearly concluded (Richter forthcoming), the Shubayqa project is a new research initiative that was launched in 2012, very much leading on from my initial work in the Azraq Oasis. In particular, I want to talk a little bit about the issue of ecological, economic and social 'marginality'. One of the primary reasons archaeologists first came to the Azraq Basin to carry out field research was to study how environmental change, as well as economic change elsewhere, affected communities inhabiting this region who were, environmentally speaking, 'on the edge'. I argue that although research was initially driven by these concerns, the time has now come to abandon this idea of marginality that depends too heavily on a juxtaposition of the margin versus the centre. To do that I will reflect on the archaeological and palaeoenvironmental results from Ayn Qasiyyah, as well as the work that has been done to date at Shubayqa 1.

Ayn Qasiyyah

Ayn Qasiyyah is the smaller of the two principal springs that used to feed the southern Azraq marshlands (Figure 1). Now an empty, dry pool, the Epipalaeolithic site is exposed at various points in its northern wall as a dark band of buried marsh sediment (Richter *et al.* 2007; 2010a; b; Richter and Röhl 2006; Rollefson *et al.* 1997; 2001). This deposit sits

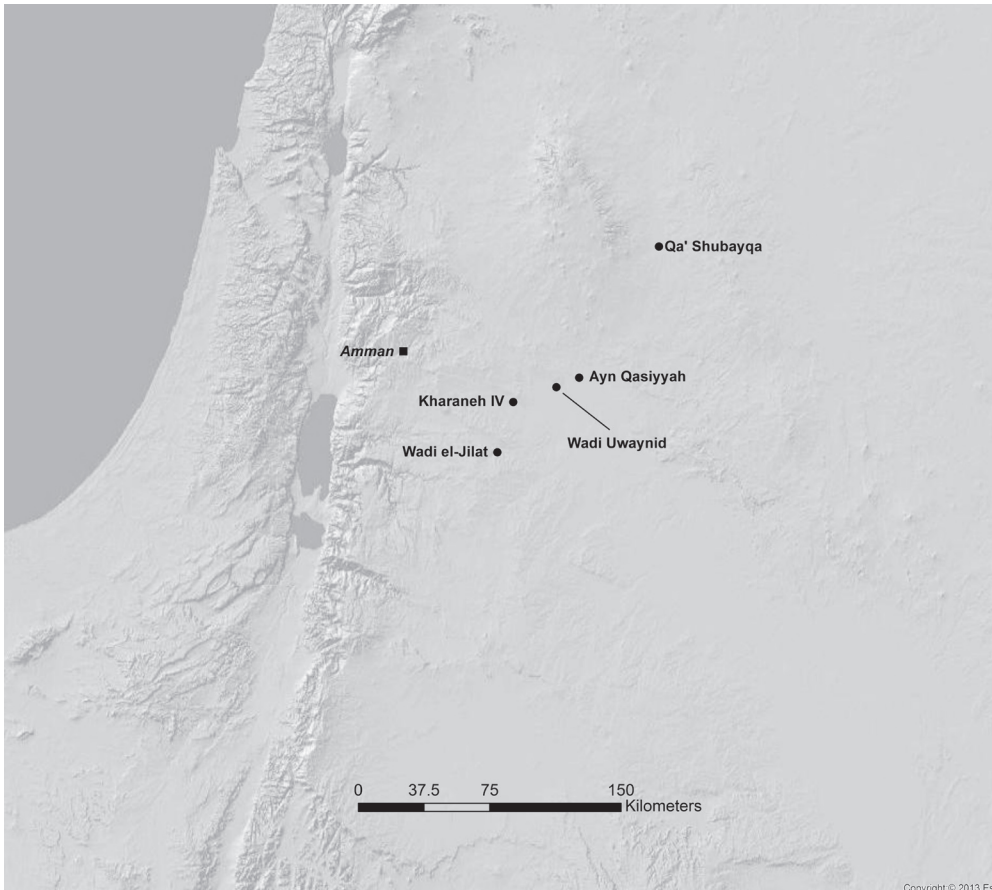


Figure 1. Map showing locations mentioned in the text

above a series of lacustrine sediments and contains abundant chipped stone artefacts and faunal remains (Figure 2). These lacustrine sediments suggest that a substantial body of fresh water existed here prior to the early Epipalaeolithic settlement at Ayn Qasiyyah. Although there are periodic drying events – which suggest episodes of lake recession – the sequence shows that water was more or less permanently available in the southern Azraq marshes throughout the 30,000–19,000 cal BP time frame (Jones and Richter 2011).

Excavations of the early Epipalaeolithic sequence focused on three areas (A, B and D). The stratigraphy of all three



Figure 2. Ayn Qasiyyah sedimentary profile showing the dark palaeommarsh deposit that contains the early Epipalaeolithic site

is highly comparable with the bulk of early Epipalaeolithic finds situated within the dark palaeommarsh deposit that was encountered in all three excavation areas. Although the AMS dates obtained for the three areas differ slightly (see Jones and Richter 2011, Table 1), geomorphologically speaking the marsh formed as part of the same overall event. Close examination of the chipped stone artefacts and faunal remains, the distribution of finds and the nature of the sediment, supports the idea that the site largely consists of secondary refuse. No floors or features were observed anywhere in the excavations, while finds were randomly dispersed throughout the sediment positioned at different angles. These observations suggest that the areas excavated are not the primary occupation areas and that the material found here was discarded or eroded into its present position. This would have been a fairly permeable and wet marsh at the time of occupation, which would likely have made it unsuitable as an occupation area. The actual occupation or camp may have been several metres away in an area not yet excavated (and probably not preserved).

The marsh was used, however, for the interment of a single individual, found buried in a sitting position (Figure 3; see also Richter *et al.* 2010b). Human remains from the early Epipalaeolithic are quite rare in the Levant (Nadel 1994) and the remains from Ayn Qasiyyah, dated to 20,400–19,800 cal BP, together with the burial from Kharaneh IV



Figure 3. The sitting burial of an adult male from Ayn Qasiyyah, dated to c. 20,400–19,800 cal BP.

(Maher 2007, Muheisen 1988), represent some of the oldest human remains yet found in Jordan. The burial position was unusual: the legs were spread apart and the torso was collapsed into itself, with the skull positioned on the chest at an unusual angle. Given the character of the sediment and the position of the various skeletal elements we suggested that the remains of this older male were probably bound or contained in some kind of cloth, before they were placed sitting upright into the permeable and wet marsh in which they sunk and were gradually buried (Richter *et al.* 2010b). This burial practice can be considered akin to excarnation treatments of the dead, where the deceased are placed in significant places and left to decay without burial. The Ayn Qasiyyah burial may suggest that these practices were more widespread during the early Epipalaeolithic than previously assumed, which would explain the relative lack of human remains during this period.

A significant quantity of faunal remains were recovered from Ayn Qasiyyah, in particular Areas A and B (Edwards forthcoming). Gazelle is by far the most common species in the assemblage, followed at some distance by equids and cattle. Wild pig also occurs in small numbers. Hare and fox are common amongst the smaller mammals. Birds are also quite common at the site, perhaps unsurprisingly given its location in the wetlands. Amongst the birds, ducks and waders were the most common types. The body part representation, in particular of the gazelles, suggests that animals were stalked, killed and butchered locally. A high proportion of the gazelle hunted were sub-adult males, which has been interpreted either as evidence for over-hunting (Stiner *et al.* 2000; Munro 2004) or year-round hunting (Davis 1997). This contrasts with other early

Epipalaeolithic sites in the Azraq Basin, e.g. Kharaneh IV (Martin *et al.* 2010). The presence of abundant birds, many of which would have also been present year-round (Edwards forthcoming), could suggest that people returned to Ayn Qasiyyah at several points throughout the year as part of a multi-seasonal pattern of occupation. Overall, the faunal remains fit the palaeoenvironmental expectations of a lush, water-rich environment populated by abundant game and plants that would have been available for human exploitation.

Two distinct early Epipalaeolithic chipped stone industries were recovered from the Ayn Qasiyyah excavations. While Areas A and B produced two very similar assemblages that appear to belong to the same lithic tradition, the assemblage from Area D was quite different (Richter *et al.* 2010a; Richter 2011). These differences were crystallized in the microlithic component and minute differences in the manufacturing techniques of microliths. While obliquely truncated and backed bladelets dominated in Area A/B, arched-backed bladelets were common in Area D. And while the non-geometric microliths in Area A/B were produced by snapping or simply retouching blanks into the desired form, flint knappers used the microburin technique to produce the microliths found in Area D. These relatively minute differences in manufacturing techniques and final microlith tool shape relate to some wider regional patterns. The Area A/B industry is reminiscent of the Kebaran lithic industry as it is predominantly known from the Transjordanian highlands, the Jordan Valley and the Mediterranean coastal region (Bar-Yosef 1989; Bar-Yosef and Vogel 1987; Goring-Morris 1995; Goring-Morris and Belfer-Cohen 1998; Goring-Morris *et al.* 2009; Olszewski 2001a; 2004). The Area D industry, on the other hand, is related to the Nebekian industry of the eastern, interior Levant (Byrd 1998; Henry 1995; Olszewski 2001a; 2004; 2006). There has been considerable debate concerning the meaning of this variability. Some have seen these differences in lithic manufacture and typology as evidence for particular social identities or even as ethnic differences (Bar-Yosef 1987; 1989; 1991; Bar-Yosef and Vogel 1987; Goring-Morris 1995; 1996; Goring-Morris and Belfer-Cohen 1998; Goring-Morris *et al.* 2009; Fellner 1995a; b; Henry 1989; 1995; 1996). Others have argued that these differences are due to adaptive and technological needs and should not be understood as expressions of the cultural or ethnic identities of their makers (Clark 1996; Neeley and Barton 1994; Barton and Neeley 1996), while yet a third group has highlighted methodological and terminological issues (Byrd 1994; 1998; Olszewski 2001b; 2006; 2011; Maher and Richter 2011; Richter 2011; Pirie 2004). The consensus would seem to accept that social aspects can play as much of a role in determining the appearance of lithic industries as other, 'external' parameters, such as raw material availability and mobility. However, given their close spatial

proximity the same external technological constraints would have applied to the flint knappers who made the Area A/B assemblage as to those who made the Area D assemblage. Mobility or raw material availability would therefore seem unlikely causes to explain the differences between the Area A/B and Area D assemblages.

The apparently patterned distribution of lithic assemblages together with other evidence, e.g. pierced marine shell pendants imported from the Mediterranean and Red Sea coasts, has revealed some interesting patterns of cultural and social interaction (Richter *et al.* 2011), which shows that the Azraq Basin was a well-connected cultural region. For a long time, the Azraq Basin, and other semi-arid to arid regions of southwest Asia, have been considered as marginal environments, on account of their harsh climatic and environmental conditions. Fieldwork at Ayn Qasiyyah, together with other sites in the Azraq Basin, has shown that this idea of ‘marginality’ is more of a modern construct that does not take into account particular local environmental conditions, such as those in the Azraq Oasis, nor does it relate to the experiences and knowledge of the communities that once inhabited this region during the

Late Pleistocene (Richter forthcoming). This has become a recurrent issue when dealing with the last hunting and gathering populations in eastern Jordan and is a theme we now also encounter in the *Qa’ Shubayqa*.

Qa’ Shubayqa

The *Qa’ Shubayqa* is situated c. 22 km north of the roadside town of Safawi in the northeastern *Harra*. This basalt desert, which stretches from the Jebel Druze all the way into modern-day Saudi Arabia, is composed of extensive basalt boulder fields that are occasionally interrupted by extensive mudflats and incised by shallow wadis. The *Qa’ Shubayqa* is a 12 sq km large mudflat formed by an alluvial fan by the Wadi Rajil. Although the *Qa’ Shubayqa* is situated in an area that receives less than 200 mm of mean annual rainfall, significant amounts of water are transported to the basin from the Jebel Druze via the Wadi Rajil. Jebel Druze receives significantly higher amounts of mean annual rainfall. This hydrological situation creates an ecological buffer in the *Qa’ Shubayqa* where much more water is seasonally available than local rainfall would usually allow. This enables Bedouin to plant cereals in the mudflat, which are used as grazing areas

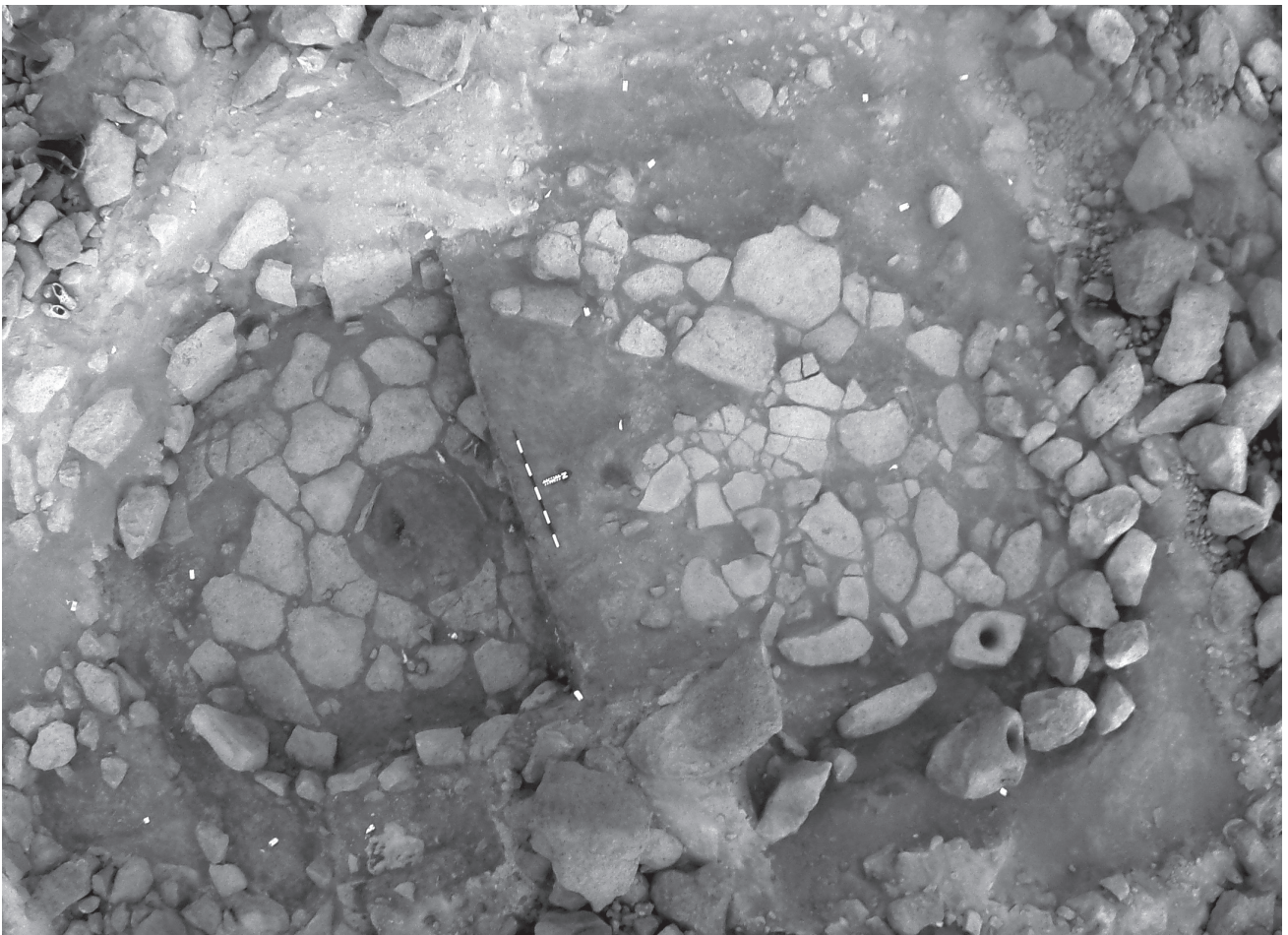


Figure 4. Overhead view of the central excavation area at *Shubayqa 1* showing the remains of two superimposed late Epipalaeolithic structures.

for livestock in the spring and early summer. It is unclear at present how far back into the past this hydrological situation existed (Whitehead *et al.* 2008), although the number of archaeological sites around the Qa' Shubayqa suggests that it may be of great antiquity. This shows that some source of fresh water must have been available to the local inhabitants, at least during some periods.

Shubayqa 1 was found during survey by Alison Betts and her team in 1993 (Betts 1993; 1998, 27-28) together with two other late Epipalaeolithic sites in the same area. In 1996, a brief test excavation at Shubayqa 1 exposed the remains of a semi-circular structure with a stone-paved floor, and recovered a large number of flint implements and faunal remains. Since October 2012 the University of Copenhagen has carried out two seasons of excavation at Shubayqa 1, which have exposed evidence for a series of dwellings, a large chipped and ground stone artifact assemblage, faunal and human remains, an astonishing archaeobotanical assemblage, as well as a range of other material culture (Richter *et al.* 2012; 2014). Shubayqa 1 sits on a mound that measures c. 30 m in diameter and rises 2.5 m above the surrounding area. The mound is composed of basalt boulders, archaeological deposits and windblown sediments. Some later architecture and an Islamic burial cairn overlie the late Epipalaeolithic occupation. The site is situated to the immediate north of the Qa' Shubayqa, at the southern edge of the abandoned medieval village Khirbet Shubayqa.

The excavations suggest a considerable longevity of occupation. Three distinct phases of occupation have so far been identified, two of which are associated with the construction of substantial buildings. Structure 1, half of which has been excavated to date, was built in a hollow that was scooped out from the natural clayey silt of the mound (Figure 4). It marks the beginning of the late Epipalaeolithic occupation at Shubayqa 1. The part of the building that has been excavated so far suggests a semi-circular shape, measuring 4 m in diameter. The wall was built of unworked basalt boulders, which were placed standing upright. This is reminiscent of some other Natufian dwellings, such as the Wadi Hammeh 27 structures (Edwards 2013). A flagstone pavement, constructed using flat and partially worked basalt blocks, was then laid down inside the structure. So far, there are no internal sub-divisions of this space, although a stone-lined fireplace was inserted into the pavement.

Structure 1 was eventually abandoned, as evidenced by the accumulation of a layer of rock tumble and windblown silt and sand. This was, however, short-lived, as the interior of Structure 1 soon became filled by secondary refuse. The midden that built up inside the structure suggests that Shubayqa 1 continued to be inhabited, but that the occupation had shifted laterally to a different part of the site. Later on in the midden's development a fireplace was dug into the refuse deposits. This was later sealed by the

deposition of yet more refuse material. Structure 2 was then built on top of this midden.

Structure 2 is situated to the north of Structure 1 and sits c. 50 cm above it. The manner of its construction is very reminiscent of Structure 1: it was built into a shallow hollow dug out of the natural sediment of the mound. Upright basalt boulders form the wall, while a flagstone paved floor was installed on the inside. Structure 2 is much less well preserved than Structure 1. Parts of the building's wall have eroded or were robbed out, so that only part of it remains. The paved floor incorporates a hearth and several ground stone tools, including one mortar and several grinding slabs. Numerous smaller ground stone artefacts were found strewn across the surface. Two infant burials were found beneath the pavement and further burials may be found in the same area in future excavations. Overall, the occupation sequence at Shubayqa 1 is more or less unbroken and continuous. A series of 12 radiocarbon dates confirm that the occupation was initially established during the early Natufian at around 14,500 cal BP and continued into the late Natufian.

Extensive soil sampling and flotation has produced a remarkable macrobotanical plant assemblage, making Shubayqa 1 one of the very few Natufian sites in the southern Levant that provides us with a potentially detailed insight into late Epipalaeolithic plant use and local vegetation cover. Although the material is still under study (by Amaia Arranz of the University of the Basque Country), the initial analysis suggests that tubers are the most common plant remains in the assemblage. Wood charcoal is the second most common group, followed by fruits seeds and finally cereals. The recovery of such a large and diverse charred plant assemblage stands in stark contrast to the barren appearance of the *Harra* landscape today. Although shrubs and other drought-resistant plant species can be found along wadi courses throughout the Black Desert, overgrazing, the damming of wadis and higher aridity have decimated this landscape's past vegetation. In contrast, the Shubayqa 1 plant assemblage suggests that there was a more varied and rich local vegetation present in the area, and hints at an environment with greater availability of water than at present. This evidence strongly suggests that the local environment provided a stable resource base for late Epipalaeolithic communities, undoubtedly owing to the hydrological context of the Qa' Shubayqa basin. In addition, there is little doubt that many of these plants, specifically the tubers, were also exploited as food.

Shubayqa 1 is not the only late Epipalaeolithic site in the Qa' Shubayqa. In addition to Shubayqa 3 and BDS 2103 (Betts 1998, 28), survey as part of the Shubayqa Archaeological Project has located an additional three late Epipalaeolithic find spots. We can add to this a further suspected PPNA site, situated on the eastern edge of the deserted village of Khirbet Shubayqa, which was located during survey in 2012 (Richter

et al. 2012). Of the late Epipalaeolithic sites, Shubayqa 1 and 3 are the most substantial. Shubayqa 3 is a lithic scatter that covers an area of 5000–6000 sq m. Traces of possible circular structures were observed on the surface. Surface collections have produced numerous ground stone tools, as well as a chipped stone industry with long and wide Helwan lunates that is reminiscent of Early Natufian lithic industries elsewhere. The PPNA site Shubayqa 6 also measures c. 5000 sq m in area and traces of a possible circular building are also noticeable on the surface. While no other PPNA sites have been located in the *Qa* Shubayqa so far, taken together, the number of late Epipalaeolithic and early Neolithic sites shows that there was quite a substantial settlement intensity during the late Pleistocene and early Holocene in this part of the *Harra*. This was undoubtedly enabled by the hydrological regime of the *Qa* Shubayqa, which allowed repeated and more-or-less continuous settlement here.

Conclusion

There have been numerous discussions of cores and peripheries in archaeology since at least the beginnings of cultural-historical settlement archaeology (e.g. Trigger 1989, 161–167). In the discussion concerning the cultural, social and economic transformations that characterized the transition from hunting and gathering to farming economies in southwest Asia, repeated reference has been made to cores and margins, centres and peripheries, whether in the guise of interaction zones during the PPNB or the Natufian core / homeland during the late Epipalaeolithic (e.g. Bar-Yosef 1998; Bar-Yosef and Belfer-Cohen 1989; 2000; Bar-Yosef and Meadow 1995; Garrard *et al.* 1996; Goring-Morris 1987). Although there has been a move towards seeing the emergence of the Neolithic as a multi-regional process that was linked in extensive socio-cultural networks (e.g. Watkins 2008), an emphasis on favourable ecological conditions remains. These ideas have withstood widespread critique of the core–periphery dichotomy in archaeology (e.g. Hodder and Orton 1976; Thomas 2001; Stein 2002; Young and Simmonds 1999; Walsh 2008). The Azraq Basin, like many other semi-arid and arid regions of the Levant, has long been described as the ‘marginal zone’, where human groups had to develop specific desert-adaptations to be able to inhabit these areas. Occupation of these zones has been seen as temporary, transient and small-scale for the most part.

In the past decade excavations and surveys in the Azraq Basin, building on earlier work in the same region, have demonstrated that some of these theoretical concerns about cores and peripheries are indeed valid. Excavations at Ayn Qasiyyah and other sites in the Azraq Oasis, as well as in the Wadi el-Jilat, Wadi Uwaynid, Kharaneh IV and now in the *Qa* Shubayqa suggest that the Azraq Basin represents its own ‘core region’ of cultural, social and economic development

during the Epipalaeolithic (Byrd and Garrard 2013, 392–393; Richter *et al.* 2011). It has been suggested, based on the perceived ecological parameters and archaeological signatures of sites in the Azraq Basin, that this area was a region of seasonal aggregation, which saw Epipalaeolithic communities coalesce on a seasonal basis (Belfer-Cohen and Goring-Morris 2011, S209-S210, Fig. 1; Goring-Morris *et al.* 2009). In this interpretation, seasonal aggregation would explain the appearance of some of the very extensive Epipalaeolithic sites at Kharaneh IV and Wadi Jilat 6. However, an alternative interpretation has now become available on the basis of this recent archaeological and palaeoenvironmental work.

Multiple palaeoenvironmental indicators show that the Azraq Basin cannot necessarily be considered a marginal or harsh environment at all times during the last part of the Pleistocene. Sedimentary data from the Wadi Jilat and Wadi Kharaneh suggest generally wetter conditions during parts of the early to middle Epipalaeolithic in these areas (Garrard *et al.* 1994; Hunt and Garrard 2013; Maher *et al.* 2011). The favourable environmental conditions that the Azraq Oasis provided have never really been in doubt, and it is clear that this area provided ample resources for hunter-gatherer groups throughout the Palaeolithic (Hunt and Garrard 2013; Jones and Richter 2011; Rollefson *et al.* 1997; 2006). Archaeological, archaeobotanical, and sedimentary data from the *Qa* Shubayqa have now begun to provide a similar picture for this area during the late Pleistocene. Plant remains recovered from Shubayqa 1, substantial depth of sedimentation in the *Qa*, and the apparent density of late Epipalaeolithic and early Neolithic sites in the area strongly hint that an ample supply of fresh water was available here, which enabled prolonged and repeated settlement. A similar pattern has been observed in other localities in the Azraq Basin, the prime example being the two very large aggregation sites Kharaneh IV and Jilat 6 (Byrd and Garrard 2013; Garrard *et al.* 1994; Garrard and Byrd 1992; Maher 2007; 2010; Maher *et al.* 2011; 2012; Richter *et al.* 2013). In addition, Shubayqa 1 is a substantial early and late Natufian settlement with evidence for architecture, intensive occupation, heavy-duty ground stone tools and human burials; in other words, it combines most of the characteristics of a Mediterranean ‘core zone’ base camp. With evidence for substantial late Epipalaeolithic settlement emerging from the *Qa* Shubayqa we can now reconstruct a virtually continuous settlement chronology of the Azraq Basin from the early Epipalaeolithic onwards into the early Holocene and thereafter. This evidence seems strongly to suggest that the concept of marginality, core and periphery is really a false dichotomy, premised on an erroneous ecological perspective. The environmental data from the Azraq Basin shows that this area overall combines some geographical features that made this a much more amenable environment to live in than has often been thought.

Together with this re-evaluation of the ecological parameters we must now endeavour to disconnect the environmental parameters from a view of Epipalaeolithic hunter-gatherer communities as simply responding and reacting to external climatic stimuli. It is, of course, the case that the Azraq Basin and other such 'marginal' environmental zones provided overall fewer opportunities for hunter-gatherers, but this does not necessarily imply social, political or economic marginality as well (Young and Simmonds 1999). The concept of marginality, more often than not, seems to be rooted in a 'farmer's ecology', i.e. land is considered to be marginal because it lacks soil and water suitable for farming. That is why regions such as the Azraq Basin, in which farming is nowadays only possible through the drilling of deep wells and irrigation, have been seen by many as such marginal zones. It is, therefore, a farmer's perspective on the ecology of these landscapes. Not only has the archaeological and palaeoenvironmental research in the Azraq Basin over the course of the last three decades shown how variable and different the late Pleistocene environment was from its present-day appearance, but we also often neglect the fact that, much like recent and contemporary Bedouin living in the interior of the Arabian peninsula, people inhabiting these regions in the past were intimately familiar with these environments and were very aware of the

risks associated with living here. We cannot automatically assume that people did not choose to live here because the environment was harsh and unforgiving, and that they were pushed into these marginal regions. Instead, these areas were at the core of their social being, the centre of their worlds and experience. The worldviews of hunter-gatherers differ significantly in this respect from those of farmers. More detailed palaeoenvironmental reconstructions and a better understanding of the intensity of human occupation of these arid regions during the late Pleistocene and early Holocene, combined with a more nuanced perspective of the way in which hunter-gatherers inhabited these spaces, tell us that marginality is, in the end, a matter of perspective.

Gary's most recent work in eastern Jordan has begun to show that this was not only the case during the Epipalaeolithic. Surveys and excavations at the Wisad pools have produced evidence for substantial late Neolithic settlement here (Rollefson *et al.* 2013). Gary's groundbreaking work far out in the Jordanian Badya is increasingly corroborated by work elsewhere in the *Harra*, which likewise shows that this region was intensively occupied during the late Neolithic (Richter 2014, Akkermans pers. comment). Once again, Gary – one of the most productive field archaeologists Jordan has seen – is pointing and leading the way in reconfiguring our understanding of the prehistory of the Levant.

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