

The Third Millennium in Jordan: A Perspective, Past and Future

Introduction

Viewed from the perspective of the last forty years, the most significant change in archaeology in Jordan has been a movement away from the focus on large town or city sites to landscape archaeology; this has involved not just a difference in choices, and in data retrieval and management, but has demanded new theoretical approaches. The process has in part been governed by the development of techniques for retrieval of organic evidence—the development of flotation systems for recovering carbonised plant materials in the 1960s, with the by-product of retrieval of small animal bones and microliths to supplement sieving—a processual archaeology (Binford and Binford 1968) “studied through the relatively disinterested medium of palaeo-environmental data” (Bourke *et al.* 1995: 32-33). This information has led inevitably from the study of the site itself, to the fields around the site, and then to the site hinterland. This in turn fuelled the development of ethnoarchaeology in the 1970s.

The development of intensive survey systems has also produced evidence on an unprecedented scale and impacted on in-field work, inviting statistical processes involving random sampling, smaller areas of more intensive excavation, and more varied site selection. The scientific input from the various dating processes and from chemical analyses, has had an impact on both the absolute chronology and on our understanding of inter- and intra-site relationships.

Accompanying shifts in theoretical approaches, mostly developed outside Jordan, paralleled these activities. Due to Jordan's environmental variability, high level of marginal pastoral land and agro-pastoralism, and low level of state formation and urbanization, the application of central place theory, and ideas on chiefdoms and state formation, which had been applied successfully in the plains of Mesopotamia and north Syria, have been less successful in the south.

Brawer (1985) estimates that over 95% of the land in Jordan is built-up, non-productive, desert or grazing land;

it is certain that a very large proportion of land in the past was devoted to pastoralism. This balance should be considered when ancient economies are assessed. Wilkinson (1994: eg. Fig. 17), in his important study of dry-farming states in northern Mesopotamia, described pastoralism as mainly concentrated on the periphery of settlements. Others have been inclined to consider pastoralism as the more stable element in such economies, and this may well be true for Jordan (see H. H. Curvers in Wilkinson 1994: 506). Pastoralism, particularly agro-pastoralism, is much more likely to be an integral or linked element of village and town economies in the south Levant, and as such to provide greater flexibility in times of stress than a reliance on intensive agro-horticultural regimes.

Theoretical Debates

For the third millennium, approaches to the archaeology of Jordan have been characterized by aggressive modelling, linked to single or simple explanation; the models have moved from 1960s explanation in terms of external population movements, to cycles of indigenous change, described in a multiplicity of terms in the 1980s, both in the Near East and elsewhere.

1. “Theory about how food systems intensify and abate”, “repeated cycles of intensification and abatement” are linked to “the varying rates at which sedentarization and nomadization have occurred” (Geraty *et al.* 1986: 117-119; LaBianca 1990);
2. “specialization” and “despecialization” as factors in the “rise and collapse of urbanism” “specialized urban economies devolved to the despecialized milieu reflected in the EB IV material record yet in strong continuity with earlier EB traditions” (Richard and Long 1995: 82); “decentralization” and “abatement”; “from specialized urban to despecialized nonurban” (Richard 1990: 56); and for the site of Iskandar “urban continuity in a period of urban regression” (Richard and Boraas 1988: 107-108);
3. “village level agro-pastoralism to urbanism and back”

- (Joffe 1993);
4. "uneven and discontinuous cycles of economic and political development" (Mathers and Stoddart 1994);
 5. "oscillations" in the "nomad-sedentary continuum" (Finkelstein 1995: 26); "cyclic processes in the arid zones" (Finkelstein 1995: 155).

Theory based on cycles of activity also relate to economic theories of "boom or bust", neatly summarized in the case of medieval Northampton (Shaw *et al.* 1997: 408-415).

Many of these terms have been applied specifically to the south Levant in the third millennium, and often describe a discernible archaeological process. They do not necessarily explain the factors which trigger the process, and they do not always identify whether the triggers or the processes are identical, either between sites, or over long periods of time. In historical circumstances, it can be seen that these triggers are complex and varied in terms of human responses to environmental and political circumstances. Complex theory is more likely to elicit valid responses from complex evidence.

Early Bronze Age I-III

The EB I is a period of change, when all agree that there is impetus towards central fortified settlements, often described in terms of urbanization and of 'secondary state formation', and towards a long term and wide-spread cultural homogeneity. Hanbury-Tenison (1986) interpreted the data in terms of increasing socio-economic complexity in the EBA, with dependence on the same (Mediterranean) products as in the preceding Chalcolithic, but with a change in organization: from tribal society and greater emphasis on herding, to fixed plot cultivation and urbanization in EB I. These changes are linked to the production of surpluses and foreign, particularly Egyptian exploitation (e.g. Esse 1991). Continuity in architectural forms, and overlap with early fourth millennium assemblages are adduced in support of this process. Opinion tends increasingly to perception of the enclosure of proto-historic settlements within the region (summarized by Mabry *et al.* 1996: 150) in a process of development towards more complex societies.

Large Sites

Urbanization is described in terms of settlement size, presence of fortifications such as those recorded at Jāwa; public buildings (judged by scale, content and linked architectural conceptualization) such as palaces/temples/altars which suggest hierarchically organized societies. Economic organization (and central place theory) is suggested by water harnessing systems (eg. Jāwa, al-Ḥandaqūq North, see Mabry *et al.* 1996: 124; az-Zayraqūn, see Ibrahim and Mittmann 1989) and communal grain storage. The evidence revealed many years ago for large granaries at

Khirbat al-Karak has reflections at Tall Abū al-Kharaz (Fischer 1997: 164) where grain was stored in far greater quantities than would fill the needs of an ordinary household. It was proposed that this was a centrally administered grain storage area, and therefore grain may have been a medium of exchange, for goods such as copper. Wine or olive oil production on a large scale at as-Sa'idiyya may also be a factor in EB II (Tubb and Dorrell 1994: 63). Seals and seal impressions presumably reflect an increasing need for administration, and large numbers have been recovered from the excavations at az-Zayraqūn (Ibrahim and Mittmann 1989; Vieweger 1997: 151, n. 9) and from other sites.

This unitary development through the EBA is however being questioned: Gophna (1998) points to signs of instability, which are reflected in the number of sites which appear to have been abandoned during the EB I period, or destroyed or abandoned during the EB II period (eg. al-Ḥandaqūq North, as-Sa'idiyya); Finkelstein (1995) suggests that interpretation should account for the diversity of polymorphic societies, with agro-pastoralist and specialized pastoralist components. Theories involving smaller scale urbanism, not pristine or secondary state formation, are perhaps more appropriate, with 'middle-range' theory linked to the scale of the urbanizing phenomenon in the south Levant. The development of an antiquities database in Jordan (JADIS) should also in due course provide a controlled statistical base for understanding scale and distribution factors in the observed phenomena of the period.

The excavations (1991-1993) at ash-Shūna North by Baird and Philip (1994) aimed at reaching an understanding of the development of major centres in the fifth and fourth millennia, dates outside the nominal scope of this paper, but the beginning of the Early Bronze Age is now generally agreed to lie in the mid-fourth millennium. The series of calibrated radiocarbon dates published by Joffe and Dessel (1995) for the Chalcolithic Period, with terminal dates around the middle of the fourth millennium, are in line with the series of radiocarbon dates from the excavations at ash-Shūna (not yet fully published, but see Philip and Rehren 1996, 131; Baird and Philip, pers. comm.); a further series of dates for the EBA is available from Tall Abū al-Kharaz (Fischer 1996). The increasing number of radiocarbon dates now available provides a foundation in any assessment of the period. (TABLE 1). Ash-Shūna also produced evidence for on-site copper working, and for the use of silver, in the EB I period. For copper exploitation in Jordan, there is the well-documented evidence from the Faynān region (Hauptmann *et al.* 1992); the availability of silver for prestige items supports the growing evidence for long-distance circulation, and probable recycling, of metals, going back to the fifth millennium, thus indicating a long-

TABLE 1. Chronology of the Chalcolithic and Early Bronze Periods in the South Levant. (After Joffe and Dessel 1995; Fischer 1996; Philip and Rehren 1996).

Period	Calibrated Dates B.C.
Initial Chalcolithic	5000
Developed Chalcolithic	4500 - 3700
Terminal Chalcolithic	3700-3500
Early EB I	3650-3350
Late EB I	3350-3050
EB II	3050-2850/2750
EB III	2850/2750-2350
EB.MB (=EB IV/MB I)	2350-2000/1900

established, long-distance network of exchange and exploitation of raw materials against which must be set our perceptions of the third millennium (Prag 1978; 1986a; Philip and Rehren 1996).

Town fortifications are generally seen as primary evidence for urbanism in Jordan, and the walls at Jāwa (Helms 1981) are described as an early diffusion from the north (McClellan and Porter 1995), even if still viewed as an anomaly (Betts *et al.* 1995: 166); but fortification walls have also been dated to this period at Jabal Muṭawwaq (Mabry *et al.* 1996: 150) and as-Sa'idiyya (Tubb *et al.* 1996; 1997). For the most part, EB I sites appear to be unfortified and to have a more open and dispersed character as at Iktanū (Prag 1993: 269; and forthcoming a). A classic example is the site of Bāb adh-Dhrā', where Chalcolithic sherd scatters appear to have been succeeded by remains interpreted as those of seasonal pastoralists in EB IA; an unfortified village of more permanent nature in EB IB; successive walled settlements in EB II and III, with a destruction followed by an open settlement mainly outside the earlier enclosure in late EB III and IV (Schaub 1993: 130-136), a pattern similar to that at Jericho.

The characteristic formation of larger sites in the EB II and III periods often exhibits a walled acropolis and lower town, protecting the water supply and agricultural land. The remarkable Tall Yarmūt in south-west Palestine (de Miroschedji 1993) has echoes at az-Zayraqūn in north-east Jordan (Ibrahim and Mittmann 1989), at Abū al-Kharaz (Fischer 1996), at as-Sa'idiyya (Tubb *et al.* 1996), Bāb adh-Dhrā' (Schaub 1993: 130-136), al-Ḥammām (Prag 1991a: 65; 1993: 271-2, Fig. 1) and other sites in Jordan. However the scale of these sites is relatively small (TABLE 2), many still shelter courtyard houses, and feature smaller postern gates as well as more elaborate main gates. The function of postern gates may be linked to the keeping of flocks within the walls and an on-going pattern of agro-pastoralism. Indeed whether the large walled towns have a role as territorial markers as much as defence has been proposed (Prag 1995b: 84).

TABLE 2. Settlement size and population estimates.

Site and date	Area	Population estimate (100/200 per ha)
Jabal al-Muṭawwaq EB I	28 ha, walled	2800/5600
Jāwa EB I	12 ha, walled	1200/2400 (Helms 3378-5066)
al-Ḥandaqūq North EB II	25(-30) ha, walled	2500/5000 (Mabry 1000+)
as-Sa'idiyya EB II	(5-)8 ha, walled	800/1600
az-Zayraqūn EB III	12 ha, walled	1200/2400
Tall Yarmūt EB III	16 ha/40 acres, walled	1600/3200
Bāb adh-Dhrā' EB III	3.6 ha/9 acres, walled	360/720 (Schaub 600-1000)
al-Ḥammām EB III	15 ha/37 acres, walled	1500/3000
Iktanū EB.MB	14-18-22 ha/35-44-54 acres, unwalled	1400/2800-1800/3600-2200/4400 (Prag 2500?)
Mishra' al-Abyaḍ II EB.MB	? 30 ha, unwalled?	?3000/6000
Iskandar EB.MB	4.5 ha/(7-)11 acres, walled	450/900

Small Sites and Landscape Studies

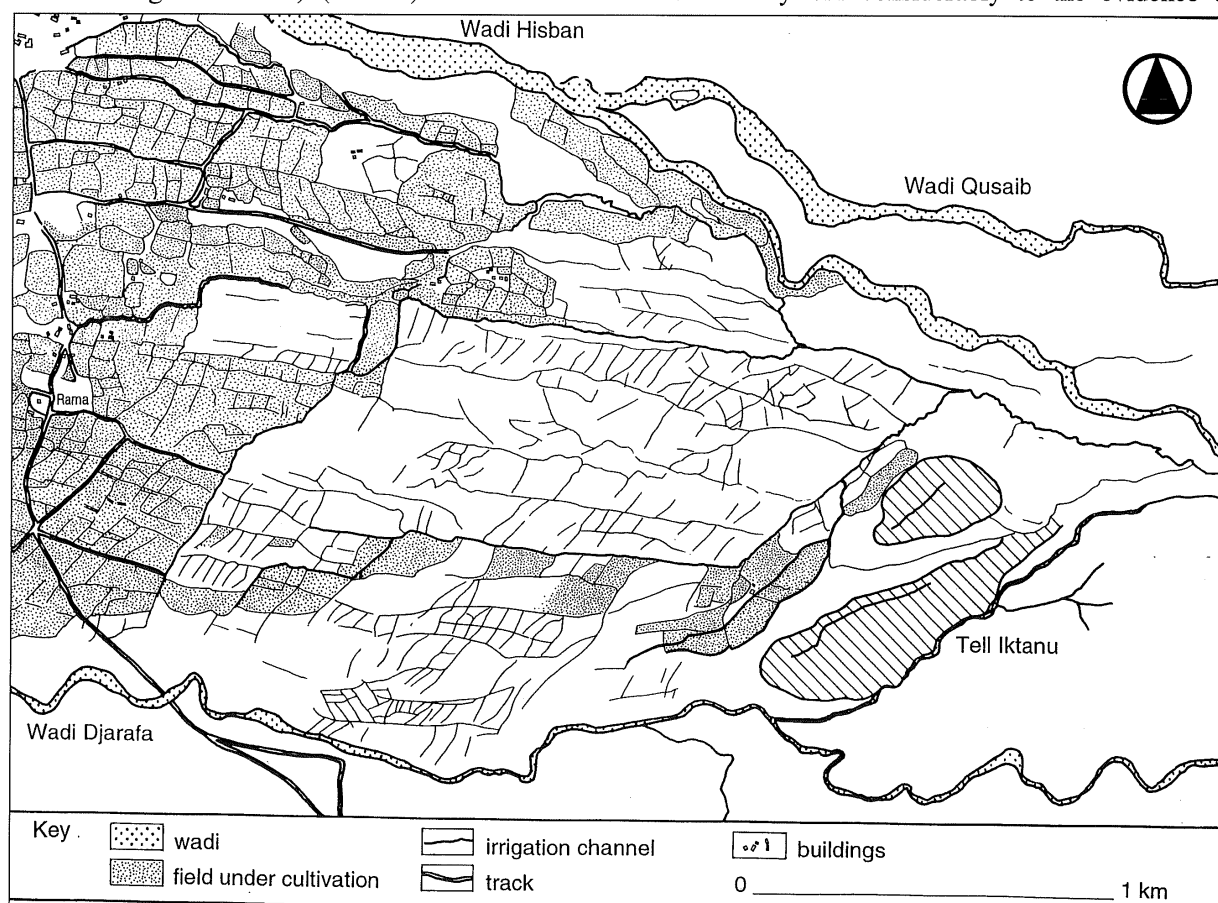
The emphasis however should not remain solely with these more spectacular and well-known sites. With advances in the use of air photography (Kennedy 1997) and the survey of field systems, there is greater potential for assessing the position of the larger sites in the countryside. Many examples of such work could be cited. In his analysis of survey evidence from the Mādabā region, Harrison (1997) noted a pattern of isolated site clusters around water sources in the Late Chalcolithic and EB I, a denser pattern in EB II-III, with centres of population showing a low level of integration and centralization, sociopolitically autonomous, in a landscape more rural and self-sustaining than urban. Recent comprehensive survey work on the extensive field systems at Wādī Faynān (Barker *et al.* 1998; 1999) has given rise to hypotheses concerning the development of early, perhaps Chalcolithic, flood-water farming on the wadi systems descending from the plateau to the Jordan/'Arabah trough, with some evidence from Faynān for EBA walls underlying the later Nabataean, Roman and Byzantine field systems. Such patterns also would not be unexpected in the vicinity of al-Ḥammām and Iktanū, where the flow of perennial streams

onto the alluvial soils adjacent to these large EBA sites, suggests they probably controlled gravity-fed irrigation to extensive field systems (Prag forthcoming b) FIG. 1. The evidence for production of flax under irrigation in the Early Bronze Age (eg. Schaub 1993: 135; Mabry *et al.* 1996) also supports these patterns. The dating of a particular type of wall in the field system at Faynān, with stones set upright in rows (Barker 1999: 269, Figs 10 and 11), is paralleled by similar walls of similar date in the excavations by K. Wright (person. comm.) on the EBA site WF100 in Wādī Faynān. These walls can be compared to the construction of the presumed animal pens at Rawda Site 3 (FIG. 2) which may date to the EB I period (Prag 1995b: 79), and in the enclosures at the west end of Iktanū (Prag 1995b: 79), which may also be animal pens and which appear to date to the EB / MB period.

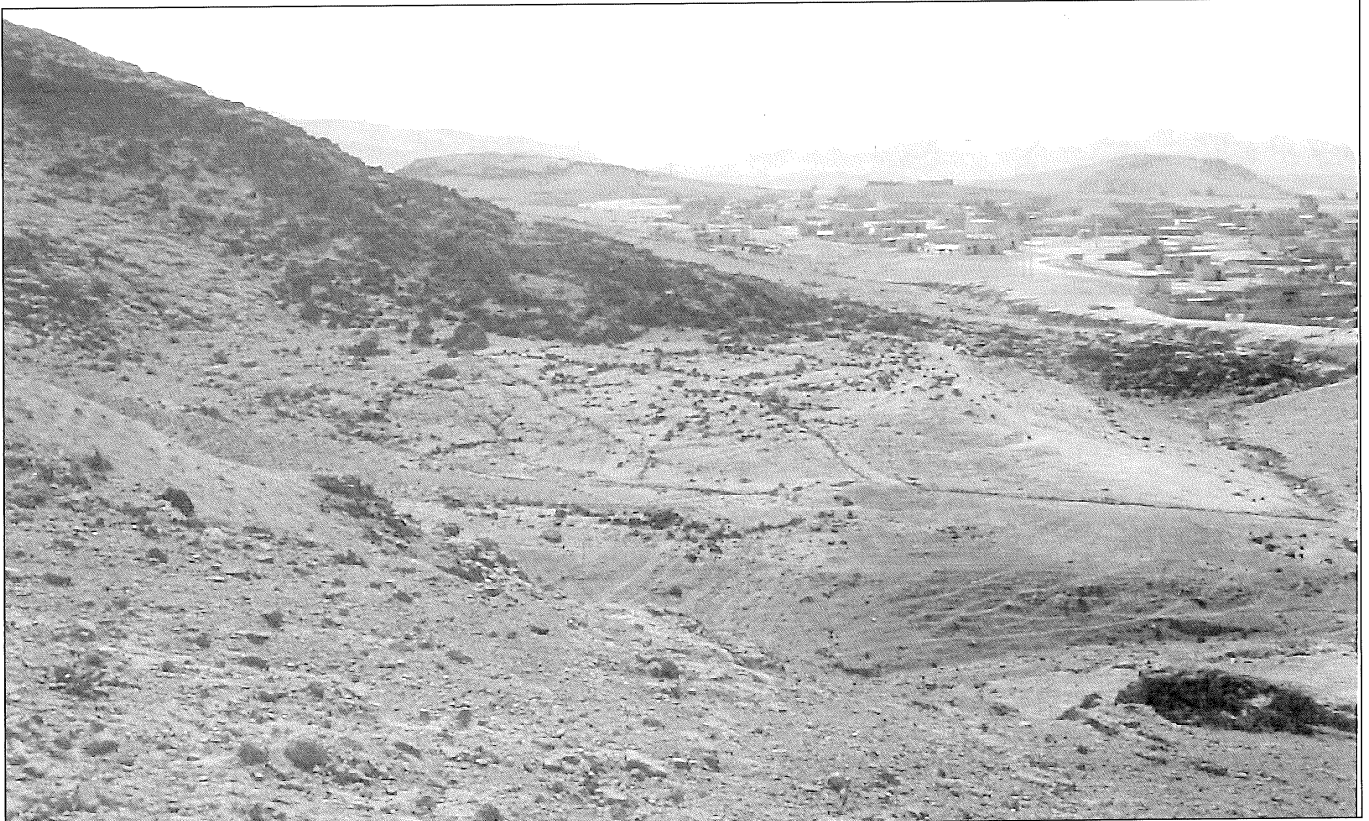
J. Mabry, in searching the banks of incised wādīs for buried sites, in 1987 discovered an EB.MB site in a cutting near the south bank of the Wādī Ḥisbān, several metres above the present incised wadi bed, but beneath 1.60 m. of alluvial soil and the present field surface (Iktanū Site G: Prag 1990: 123) (FIG. 3). P. Macumber

found a buried Epipalaeolithic site nearby on the north bank of the Wādī Ḥisbān. Rawda Site 1, covering an area of ca. 100 x 100 m., is a small EBA site which is almost invisible in the landscape, perhaps a site buried beneath alluvium, with sherds turned up by modern deep ploughing (FIG. 4). "Many prehistoric and early historic sites in the Wādī el-Yabis basin are buried under colluvial and alluvial sediments, visible only in eroded slope and wadi bank exposures" (Mabry and Palumbo 1988: 277). Whether it will ever be possible to retrieve much evidence for early sites and field systems buried in such alluvial deposits is questionable; indeed the agricultural development of the Jordan Valley may preclude this task; this increases the value of the evidence from arid zones, such as the Faynān project. A recent excellent summary of survey work and its theoretical basis by Harrison (1997) draws attention to potential sources of distortion in the field record, including processes of erosion and burial of sites.

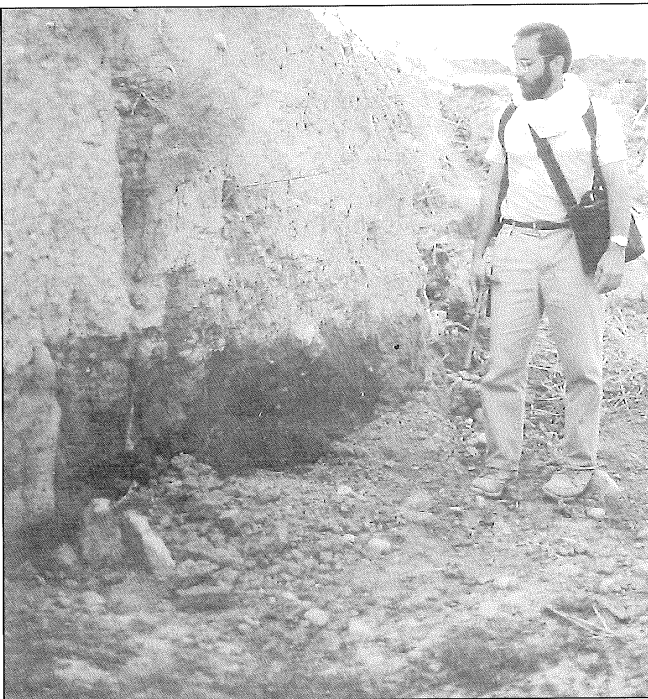
The variety of EBA activities, for which evidence increases every year, will undoubtedly change our perspectives; the assessment of small sites and landscape activities may add considerably to the evidence deriving



1. Tell Iktanū and adjacent field systems; from Huntings Air Survey, noon, 15th September 1953; uncorrected, slightly oblique view from the south-east.



2. Rawda Site 3. Dolmens and wall alignments in centre; ar-Rawḍa to west; from the north.



3. Iktanu Area G; bulldozer cut through the alluvium, with dark soils at base associated with EB.MB ceramics; found by J. Mabry in 1987.

from the so-called 'urban' sites and lead to further re-consideration of the nature of urbanism in the region.

In the Early Bronze Age, the causes of the rise and fall of defended towns based on agriculture has been a matter of debate—why did the low-level 'urbanism' of the south Levant fail late in the third millennium? Why did some EB I sites become walled towns with public buildings, while others were simply abandoned; why were some towns fortified in EB II, but then abandoned? Why were many towns destroyed at the end of EB III? There was no uniform process to suggest major invasion of the region. The revealed pattern is similar east and west of the Jordan—Iktanū, like Jerusalem for example, seems not to have been fortified in the EBA, and was probably abandoned through most of EB II/III; as-Sa'idiyya, like Arād was fortified in EB II, but abandoned in EB III; while other sites such as az-Zayraqūn, like Tall Yarmūt and Jericho, were fortified in EB II and remained so during EB III; perhaps some answers lie in the nature of the economic basis on which each settlement was founded—in some regions the agricultural base was too marginal for the nature of contemporary development, and the population fragmented, with some elements developing a more mobile pastoral existence, and others being attracted to developing agricultural and expanding urban economies elsewhere, thus



4. Rawda Site 1 found by G. W. Newton in 1989; EBA sherds in ploughed ground marked X beside the gully to right; looking west towards ar-Rawḍa.

creating an influx from 'countryside' to 'town'; if so, the same kinship groups may have diversified to sedentary and nomadic lifestyles

The Late Third Millennium

The EB IV (= EB IV/MB I = EB.MB) period is most often described in current theoretical terms as the final cycle of the EBA: a linear decline following the rise and peak of urbanism, though there is some debate around the use of the term urban. No-one disputes the elements of continuity between EB III and the EB.MB period, though some continue to press for a complete break at the end of the period, with little or no continuity to the MBA. Combining this view with adherence to the indigenous cycles of urbanism theory demands some agility. Harrison (1997) notes that for the EB.MB period, the settlement pattern of the Mādabā area reverts to that of the Late Chalcolithic/EB I, and other similarities between these periods have been proposed (Prag 1995b). The EB I period is usually seen as a period of vigorous change, and the EB.MB period as one of decline; perhaps it too should be re-considered as a forerunner of social change.

Richard (1986: 11-12) noted that the changes from EB

III to EB IV were dramatic, but this statement was qualified shortly afterwards: "Sociological change at ca. 2350 BC now appears to have been far less dramatic than hitherto believed, and the adaptive strategies of the EBIV peoples were not everywhere as simple as the current pastoral-nomadic model would suggest." (Richard and Boraas 1988: 108). In support of her model of EB III/EB IV continuity, Richard listed 14 points of continuity between the EB III and EB IV, based around the perception of Iskandar as a final illustration of EBA urbanism. Taken singly, many of these points are debateable as representing urbanism, but together they present a more sedentary image than that projected by the Kenyon model in the 1960s; more similar to Glueck's interpretation (from 1935: 138 to 1970:157) of an advanced civilization based on fortified sites, extensive agriculture but a semi-sedentary population. Much work has gone on since that time however, including a reassessment of Glueck's work. Settlement patterns still indicate a substantial degree of change, and many conundrums still remain to be investigated. The on-going tendency, to polarize the discussion between the long-discarded "Amorite invasion" hypothesis, and the current "cycles of urbanism" model,

leads to a series of restatements of hypothesis and aims which are confusing. At least there is increasing consensus that the issues are complex, and not readily explicable by strong statements of simple interpretation ("models"). In this sense, post-processual and interpretative archaeology may represent a more adaptive and penetrating way forward.

What are the main problems, and how can they be addressed? Two of the most extensively excavated EB.MB sites in Jordan, Iktanū and Iskandar, highlight some of the problems. They have a great deal in common, though rather contrasting environmental regimes and site structure; together, and when finally published, they have much information to offer. On current evidence, both sites appear to have been abandoned between the EB I and the EB.MB period (although some possible early EB II occupation is found at Iktanū, and a few EB III ceramic fragments from Iskandar have been recorded); in this Iktanū and Iskandar differ from both Jericho and Bāb adh-Dhrā', sites which reveal continuous occupation from EB I until a destruction in the EB III period. The EB.MB populations in the immediately succeeding phase at Jericho appear to have avoided the ruins, and to some extent the same pattern is revealed at Bāb adh-Dhrā', where minor, unfortified settlements on the *tall* and in the vicinity are recorded. An unfortified village was later built on the Jericho *tall*, but the Bāb adh-Dhrā' town site was thenceforth almost abandoned (Prag 1986b; Schaub 1993). Direct continuity from EB III to the EB.MB period is not witnessed at any of these sites.

Iktanū

The aims of the project in 1966 were two fold: 1) to investigate an accessible and well-preserved site of the EB.MB period and 2) to establish a regional archaeology by surface survey supported by the limited excavation of selected sites. The site lies on the edge of fertile alluvium in al-Ghawr, in a region with an annual rainfall of less than 200 mm but located just south of a perennial stream. Its estimated extent is 14 to 22 ha. extending over and beyond two natural hills and a wadi. The maximum depth of cultural deposits in the EB I is ca. 2 m, and in the EB.MB ca. 1 m. Several dispersed phases of occupation were noted in the EB I, and two phases, both short-lived but more extensive, in the EB.MB period. The site is unfortified, for although house walls define an edge of the settlement, many passages between the houses open into the countryside (Prag 1990: 125 and Fig. 5), and dense sherd scatters, querns, mortars and chipped stone continue beyond the built-up areas, especially to the north of the site. All remains investigated appear to be domestic, and there is much evidence for food storage and processing, as well as a pottery kiln site (Prag 1988). No cemeteries were discovered, but there is some evidence to suggest the con-

struction or re-use of dolmens in the vicinity for burial.

Other large EB.MB sites exist in the area; at Tall al-Ḥammām, the EB.MB occupation follows EB III probably after a destruction (Prag 1991a); Mishra' al-Abyaḍ II (Mellaart 1962: 130, 138; Prag 1971: 108-109) appears to be a new site, without other Bronze Age occupation. Smaller sites are also recorded (Prag 1974: 75-76)

Iskandar

The original aim of the project was to investigate the abrupt break between EB III and EB IV (Richard 1982: 291), when it was thought that Iskandar was continuously occupied throughout the EBA, like Bāb adh-Dhrā'. Later the primary focus was "to test the hypothesis that sedentism - that is, permanent agrarian settlement—was an alternative subsistence choice" during the EB IV period (Richard 1993: 650). Iskandar is located on the central Jordan plateau, with an annual rainfall of ca. 250 mm but no perennial wadi or spring. The original size of the site is no longer clear, due to agricultural development since Glueck's visit; it is variously reported as 11 acres (Richard and Borass 1984, 64) and 71/2 acres (Richard 1986: 6; 1993: 649) but these figures may refer only to the principal west sector of the original site as described by Glueck (1939: 127, Site 168). The principal remains occupy a mound west of two small wadis (Richard 1993: 649); further remains, including extensive shaft grave cemeteries, are located between two small wadis to the east (Cemetery E, associated with stone circles and menhirs), to the south across the main wadi (Cemetery D) and to the west (Cemetery J). Glueck also observed traces of house foundations to the north of the main settlement. The depth of deposit for the EB I appears to be small; for the EB IV period a depth of up to 3 m is reported. One phase of occupation is dated to the EB I, and six to the EB IV. The site was unfortified in the EB I and during the first and last phases of the EB IV (Phases G, F and A1), but fortified in Phases E to A2 of the EB IV period (Richard and Long 1995). On the site, possible cult areas and other public structures have been identified suggesting a permanent, agriculture-based, complex society at Iskandar. Much evidence has been uncovered for food storage and processing, and other activities such as spinning and chipped stone working on the site.

Iskandar, so far unique for its complex 3 m mainly EB.MB stratigraphic sequence, is still subject to ongoing reappraisal due to the tiny exposure of the earlier phases, a matter to be addressed in the forthcoming Phase 2 of the project. Glueck (1939: 127-129) noted that the site was much ruined, and sherds of LB, IA and Roman/Byzantine date and possibly of the Middle Bronze Age were found on the surface and in the upper soils (Richard 1983: 52; Richard and Long 1995: 84; Parr 1960, Fig. 1:7, 14), and perhaps suggest some deflation. At Iskandar, Glueck de-

scribed a larger site, noting ruins spreading beyond the wadis on the west, south and east, and beyond the fortification wall on the north side. It would be interesting to know whether the site, at least in its latest, unfortified phase (A1) spread outwards in a similar manner to that observed at Iktanū and Bāb adh-Dhrā'. A fortified Iron Age and Persian period occupation existed on part of the site at Iktanū, and a scatter of Byzantine and Ottoman fragments not associated with structural remains.

The values of excavating multi-period *versus* single period sites have been noted by Parr (1990-1: 80), Philip and Baird (1993: 15) and Bourke "comprehensive, quantitative data-sets taken from long, unbroken developmental sequences" *versus* the "staccato testimony" of single period sites (Bourke *et al.* 1995: 32-33). However the values of single period sites or sites with interrupted occupation are equally rewarding, for their extensive ground plans, and for the visibility of residual material within assemblages (Prag 1988: 66).

Statistical and Ethnographic Archaeology

Information derived from survey and ethnographic studies has been combined to produce statistics for population size and economic sustainability. There is wide variation in the former, with different density factors (often in the range of 100 to 200 persons per hectare), deriving from varied sources (see e.g. summary in Watson 1980; Wilkinson 1994: 495, 503); the reliability of statistics derived from field survey is always difficult to assess. These processes have been carried further in Palestine (eg. Broshi and Finkelstein 1992: 56-57); there are not yet sufficient data to apply credibly the process in Jordan but some attempts have been made (Mabry *et al.* 1996: 150) (TABLE 2). In future there may well be a basis in population statistics from Palestine, Jordan and Syria to address demographic changes at this time.

Fortifications

Glueck (1935: 138; 1939: 268; 1951: 423; 1970: 157) concluded that a large part of the EB.MB population of Transjordan was (semi)sedentary, and that many sites were fortified at this period. Virtually none of these sites have been excavated, although according to Richard (Richard and Long 1995: 82), Palumbo and Mabry described fortified sites of the period; this is in fact misleading, for they refer only to a few fully sedentary sites, not fortified ones (Mabry and Palumbo 1988). Palumbo *et al.* anticipated fortifications in their excavations at Jabal ar-Raḥail (1996: 393 ff.; 'er-Reheil' in Glueck 1939: 210-211; Prag 1971: App.) but they were unable to verify the date and nature of the shallow and eroded remains they encountered (1996: 400), with no certain stratigraphic evidence, and the possibility that the walls were terraces rather than fortifications. Until excavated, fortifications

will remain uncertain on many of Glueck's sites (Prag 1995a: 111-112). At present (as noted in Prag 1974: 97), Megiddo might be the one site that really presents some continuity in its public buildings from EB III into the EB.MB period, and renewed excavations at that site are now in process.

At Iskandar, the Phase D domestic levels contemporary with the founding of the defensive walls and towers have not yet been excavated (Richard 1990: 36), thus the dating of the fortifications appears to depend on the excavation of a small section of the foundation trench in Area B; indeed the "inner line" of the fortification on the north-west corner was dated to either EB IV or EB I as recently as 1990 (1990: 39) when Parr's evidence (Parr 1960) for an EB I date was again revived, though this early date has apparently again been revised to EB IV in 1995. The dating of the fortifications to EB.MB Phases D to A2 has however been generally consistent. That the occupation appears to be restricted to EB I and EB.MB, as at Iktanū, and is not continuous through the Early Bronze Age as once thought, adds a puzzling note to the proposed continuity. If the site with its unusual fortifications (unusual for the Early Bronze Age, apparently approximately rectangular, 150 x 150 m, with corner and median towers, bisecting east-west wall, and 'moat-like depressions' to north and west, see Glueck 1939: 127; Richard and Long 1995), is a renewed foundation after a long gap, then direct continuity is not a factor. If direct continuity is involved, one might expect to find it at Bāb adh-Dhrā', where EB III fortifications were destroyed, and not rebuilt in the following unfortified EB.MB settlement. A few EB III sherds, but no trace of EB II-III occupation have been discovered at Iskandar. To find new fortifications on a site abandoned since the EB I period is another factor which provides stimulus in the quest for elucidating this subject. Perhaps the level of destruction of late EB III sites was such that the sites were not at first re-inhabitable. Perhaps their original function, in protecting water sources and field systems, was no longer relevant to the changes and development of emphasis in agro-pastoralism. It may be that the system of EB.MB fortification is of a rather low level, in nature more like the meandering boundary wall connecting the back walls of houses in Phase B on the south side of Iskandar. The ethnographic-based studies of enclosures, from tent to village, may be of relevance here (see Cribb 1991; Finkelstein 1995).

Ceramics

Both Iktanū and Iskandar have provided evidence for large quantities of ceramics, much of very similar style. The manufacture of pottery in itself is not necessarily to be seen as a sign of urbanism. At Iskandar, it has been suggested that two rooms containing a large quantity of pottery in Phases C and B may have a cultic character, which under-

lines the presence of public structures on the site. However large quantities of pottery in two rooms at Iktanū can be readily understood in a domestic context (Prag 1993: 270). As previously noted (Prag 1974: 78) red-slipped and burnished pottery, a recognizably EB tradition, continues to be produced into the latest phases of the EB.MB period in the south of Jordan, and continues in use in the latest phases at Iskandar. Further north, at Iktanū, this tradition had already disappeared before Phase 2; there does also appear to be a greater emphasis on bowls or platters in the south (cf. Prag 1974: 78 and Richard and Boraas 1988: 124). The regional character of the EB.MB period which I outlined in 1974 is still underestimated, and conservative traditions in the southern highlands of Jordan might be a basis for this regional diversity.

The division of EB.MB ceramics into families, which are not pegged to any chronological or stratigraphic framework, is misleading. Amiran's pioneering work (1960) provided an initial framework for understanding the problems represented by the archaeology of the period, but in developing this approach, Dever's work (1980) was a *cul-de-sac*, which continues to be elaborated (Palumbo and Peterman 1993). The fallacies are illustrated by Richard's conclusion that ceramics typical of the Transjordan, South Palestine, Central Hills of Palestine and Jericho families are all found in exactly the same context at Iskandar (Richard and Boraas 1988: 126). It may be more profitable to assess the overlap in terms of the relations—chronological, social, economic and cultural, between the geographical zones. The issue of the connections with Syria has not yet been fully explored, and is reflected in the presence of Syrian vessels in central Transjordan (Richard 1993: 650; for the wider distribution, see Dever 1980: 51, Fig. 5).

Assemblages

Much of the equipment of Iktanū and Iskandar is similar, and the range of cultivated plants, on very preliminary assessments, has much in common. One interesting point is that Richard notes spindle whorls—"The usual stone and ceramic spindle whorls came to light" (Richard 1983: 51), and benches lining the walls of rooms—none have been found at Iktanū. Some aspects of the assemblage at Bāb adh-Dhrā' are closer to those of Iktanū, perhaps indicating more direct links in the lowlands than with the highlands. There is no doubt, simply on the basis of stratigraphic build-up, that Iskandar represents a more permanent and longer-lived settlement than Iktanū.

The differences make clear that the tendency to interpret the archaeology of the whole period, or even one ecological zone, on the basis of the excavation of one site, is inadequate. Iktanū appears as a large scale village but with interrupted and short-lived phases of occupation—on the edge of permanent settlement but with a range of ag-

riculture and horticulture; and Iskandar emerges as a small "well-defended, permanently occupied, multi-phased settlement"—although the permanence or stability of the occupation is somewhat uncertain, with evidence for destruction of the fortifications at the end of Phase C (Richard and Boraas 1988: 113), a rebuild in Phase B and abandonment of the fortifications during Phase A1.

Cemeteries

There are still many potential areas of investigation into the diverse burial customs of the third millennium. Striking differences relate to scale and visibility. More cemeteries of the Chalcolithic and the EB.MB period continue to be revealed, with evidence for disarticulated bones or no bones (Levy and Alon 1985); compared with relatively minor evidence for the EBA (apart from the multiple, articulated burials in the charnel houses and other grave types at Bāb adh-Dhrā'). There is no general evidence for large scale mortality at the end of the EB III. There is no need to outline this well-known evidence in detail here; but to draw attention to the scale of EB.MB cemeteries which itself marks a major change from the surviving EBA evidence. Acres of the landscape were taken up by shaft grave cemeteries in the EB.MB—there is no evidence to show whether these graves were marked on the surface, but the frequency of reuse in the MBA suggests that they may have been; at Iskandar, where a number of menhirs and stone circles existed in two of the cemeteries (east and south of the site) (Glueck 1939: 128-129; Richard and Boraas 1988: 122), the question of whether they bore some funerary aspect, as markers, prestige symbols or cenotaphs, is unresolved. In contrast to the EB I-III periods, with their cities of the living, in the EB.MB period we appear to have cities of the dead. The evidence that dolmens were in use and re-use in the EB I and the EB.MB periods, with their potential role and significance as territorial markers, is also relevant (Prag 1995b: 83-84). The extensive cemeteries of the sheep/goat Bedouin pastoralist of recent times also suggest ethnographic analogies which may reflect on the practices of earlier agro-pastoralists.

One of the large cemeteries being excavated in recent years in the Mādabā region was in use in both EB.MB and MBIIA periods; with these shaft tombs were "cistern-like structures" which may indicate a "settled population nearby" (Waheeb and Palumbo 1993: 153). The large cistern-like excavations had silt as well as other finds, but no published evidence for water channelling. They are larger than the silos noted at Iktanū, but a storage function appears likely.

Terminology

The same publication draws attention to another area which still needs refining. In dating the use of the ce-

metry in the Mādabā region to the EB IV and the MB IIA periods (in Kenyon's terminology = EB.MB and MB I), a reader is inclined to miss a possible continuity of use—at Jericho EB.MB tombs were frequently reused in MB IIB and IIC (in Kenyon's terminology = MB II), but in this cemetery the re-use appears to be more rapid. In a model which rejects any continuity between EB.MB and MBA, a terminology in which there is no usable 'MB I' period appears to create a cultural break. Increasingly the need to restore a terminology which does not have such gaps, and which does not, by its very syntax, reject models of continuity, would be preferable.

Concluding Thoughts

Relatively few third millennium sites have been excavated in Jordan, and of these a very high proportion are multi-period town sites or cemeteries. In assessing the environment of these sites, the integration of evidence from geological, geomorphological and hydraulic resources, offers great potential (Macumber *et al.* 1997; Barker *et al.* 1998). Ethnoarchaeology, another key to unlock the understanding of local landscape utilization through time, has run hand in hand with the development of more complex approaches; politics, not just environment, played a role in complex human responses to situations in the past. Recent theoretical discussions, in post-processual archaeology (Hodder 1985), upgrade the role of human agency and adaptations to given sets of environmental conditions, rather than presenting more objective social patterning as models of change; where there is no absolute historical knowledge, interpretative archaeology (Tilley 1993) may invite new perspectives. Cognitive archaeology (Mithen 1998) ventures further, "cognitive fluidity" brings fresh discussions of the connections between man, artifact and animal in prehistory, and the impact of modern interpretation.

Despite the ever-expanding range and complexity of data available to archaeologists, the archaeological evidence usually lacks the political/historical dimension, and this should impose caution in developing sweeping hypotheses. "There have always been historians, ...who have argued that in any unit there is an inbuilt process of decline...I have made it my business to challenge these to my mind over-simple theories and the sweeping explanations they imply...There is surely no such thing as a model of decadence. A new model has to be built from the basic structures of every particular case." (Braudel 1966 edition: 1239).

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