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Jordan at the End of the Fourth Millennium-Changes and Challenges

There are many wonders of Jordan-natural, historical and archaeological – which have rightly been promoted for their own merits and especially for tourism: Wādī Rum, Petra, Jarash Mādabā, Karak, the Desert Castles, the 'Ammān Citadel and theatre, to name but a few. One group of sites not likely to be on that list, but still very important in forming not only the ancient historical landscape of Jordan and also visibly evident in the present landscape, are the Early Bronze Age *talls* spread throughout Jordan. Beauty is in the eyes of the beholder. My trips to Jordan over 45 years have often included moving from one Early Bronze site to another, marveling how their ancient inhabitants carefully chose their locations to build walled towns, erect monuments and institute changes which forever modified the landscape of Jordan.

Significant Changes in the Last Half of the Fourth Millennium

Changes that took place beginning in the last half of the fourth millennium (overlapping with traditional Early Bronze I) influenced settlement, subsistence and ceremonial patterns. People were on the move. Small open villages built on slopes in lowland areas close to water sources were abandoned and new sites were chosen for their defensibility. Other changes associated with the new towns include dams and irrigated fields, orchards and extensive new areas of ploughed arable land. In addition, this period appears to be the setting for a ceremonial landscape that includes grave circles, huge cemeteries, large monoliths and dolmen fields across the land. Of these features, I will concentrate in this article on two: changing settlement patterns and the ceremonial landscape. G. Philip has commented that "from the late fourth millennium BC onwards, the inhabitants of Jordan would have moved within a landscape much of which originated in the Early Bronze Age" (2008: 197).

The Challenge: How to Interpret these Significant Changes?

Changes in settlement patterns and the ceremonial landscape have been well documented by scholars of this period for many years. But the challenges of understanding them seem to have increased in the past twenty years, especially in problems relating to the chronology of the period. Thirty years ago most scholars were content with a 300 year period from 3300BC to 3000BC for what they called the Early Bronze I period. Today, with new excavations and more reliable C14 dates, EB I is now expanded to six hundred years, *viz.* 3600-3000BC. This expanded period has created many problems for the various hypotheses that have been developed to explain how, when and why these changes took place. The problems are particularly acute for those who have argued for a uniform cultural development throughout the late fourth millennium.

Changing Settlement Patterns

Many settlement pattern studies share a common perception of the EB I as a coherent unit exhibiting unilinear evolutionary development of culture and settlement throughout the period. In early EB I there is major growth in the number of sites and in late EB I, or in the transition between EB I and II, an agglomeration takes place with fewer but larger sites with frequent relocation. Much of the data is based on surveys. In early EB I there is an explosion in the number of sites throughout the land. Joffe counts 462 new sites that begin in EB I (1993: 48). Beginning in late EB I there is a decrease in the number of sites in most regions, as well as an increase in the size of settlements and the number

of walled settlements. In EB II settlement patterns change radically. There is a major drop in the number of settlements. Overall, Joffe lists 631 known EB I sites in his 15 regions (1993: 73). Most of these sites (405 or 64 %) do not continue into EB II. In the Jordan valley, for example, Joffe lists 90+ sites for EB I and 45-50 for EB II. He explains the trend, as others do, as one in the direction of agglomeration and nucleation, with the most profound change being the building of fortifications around sites. Both JADIS (1994) and a recent study by Savage, Falconer and Harrison (2007) expand the database and reveal a similar picture. During the late fourth millennium major changes took place in the settlement patterns of Jordan. Cautions and caveats are of course necessary in assessing the value of these survey data.

Some major excavated sites in Jordan lend support to this interpretation of linear development. At Bāb adh-Dhrā' there is an early EB I campsite settlement, which is followed in later EB I by an established village high above Wādī al-Karak which becomes the location of the EB II-III walled town (Schaub 1993; Rast and Schaub 2003; Schaub and Chesson 2007). The cemetery at Bāb adh-Dhrā' mirrors this development, with early EB I shaft tombs succeeded by round burial house in late EB I and rectangular burial house throughout EB II - III (Schaub and Rast 1989; Schaub 1993). Similar development in walled town settlements, with some beginning in late EB I and many more in EB II, may be traced at Khirbat al-Batrāwī in central Jordan and at many of the Jordan valley sites, e.g. Tall Abū al-Kharaz, Tall al-Handāqūq (S) and Pella.

Challenge to Evolutionary Theory

A major challenge has been laid down at this theory of an evolutionary trajectory leading from the collapse of Late Chalcolithic society in the second quarter of the fourth millennium to a major expansion of village sites in EB I, leading to the first cycle of urbanization hundreds of years later through successive phases reaching a peak in EB II. Relying on data from the Hula valley survey with reliable ceramic evidence, Rafi Greenberg was able to distinguish between early EB I (gray-burnished) and late EB I (grain-wash) wares commonly used in this area, complemented by a series of distinctive late EB I indicators (2002: 42-44). Greenberg was further able to demonstrate clearly that all of the early EB I sites located in valley areas near water (the same pattern noticed in many other regions for EB I) were abandoned before the end of EB I. In EB II some of the abandoned sites are reoccupied, but eleven new sites are also established, located at strategic transitional points with a proclivity for topographically prominent locations, more easily defensible and further away from water and alluvial soils than the sites of early EB I (2002: 73-77).

This break in the settlement patterns of the two periods, early EB I and late EB I, leads Greenberg to call for a rethinking of the uniformitarian evolutional perspective. The greatest problem is the assumption from survey data that EB I sites are continuously occupied during the six centuries of this period (3600BC-3000BC). Many studies do not distinguish phases in EB I. Other studies that do distinguish sub-phases assume linear evolution.

Survey Problems

In an article on shifting settlement patterns in central Jordan, for example, Harrison tends to confirm the theory of linear developments from EB I to EB III "Late Chalcolithic sites were consistently small and tended to cluster along *wadi* systems or adjacent to springs" (1997: 11). Overall settlement during the Late Chalcolithic was sparse, consisting primarily of isolated clusters of communities engaged in basic subsistence activities. The following transition period between EB I and EB II witnesses "a fundamental shift in settlement patterns across the southern Levant" (1997: 13). A dispersed village culture began to coalesce into large settlements (linear evolutionary development). It is a pivotal period in the development of the Early Bronze Age. Generally there is a "decrease in the number of settlement from EB I to EB II matched by a concomitant increase in average site size". The crucial issue here is the question of continuity. Harrison argues that the evidence is relatively unambiguous. A high percentage of EB I sites are also occupied during EB II-III. Actually, this is true in central Jordan only for the larger sites. The overall figures show that the majority of EB I sites do not continue into EB II. A basic problem in the data from central Jordan is that it is difficult to separate time periods from the Late Chalcolithic to EB II. This is understood as a single, extended transitional phase that blurs many important developments, including which sites were abandoned and which were continuously occupied.

Similar dating or terminological problems

emerge in interpreting the results of other regions in Jordan. In the Wādī az-Zarqā' region, some inconsistencies appear in the survey reports. Some of the studies appear to support the overall evolutionary patterns, while others lend credence to a non-linear disjunctive pattern similar to that argued by Greenberg. In the Wādī az-Zarqā'/ Wādī adh-Dhulayl survey conducted by G. Palumbo and others, neither Chalcolithic nor EB I sites are well-represented in the upper Wādī az-Zarqā' region (1996: 385). A few sites dated to the Chalcolithic are limited in scope and are interpreted as seasonal encampments. No clear EB I sites were found in the survey area. Instead of an explosion of EB I sites there is little settlement activity and occupation is seen as mostly pastoral. On the other hand "the change in settlement pattern between EB I and II is stunning" (1996: 386). EB II is seen as representing the first intensive 'colonization' of the area. Eight EB II sites were identified with three of them being fortified towns. All of the EB II villages are situated on hilltops or promontories, surrounded by enclosure walls or true fortifications. This pattern of sites of does not stop in the survey area. It is stated that the entire az-Zarqā' basin, from 'Ammān citadel to the confluence of the river with the Jordan, is dotted with fortified EB II villages, some of considerable size. This scenario clearly does not fit the general pattern of linear evolution from EB I village, to EB II fortified town, to major walled city in EB III, although one site – Khirbat al-Batrāwī – does fit this pattern.

A later reworking of the settlement pattern evidence by Douglas in connection with the Khirbat al-Batrāwī project compared the results of surveys in the upper Wādī az-Zarqā' with those of the middle Wādī az-Zarqā' (2006). Seven EB I sites are recognized, but none of these are large and the stated date of Chalco / EB I for several is hardly reassuring. On the other hand, Douglas cites the results of surveys in the middle Wādī az-Zarqā' region which present a very different picture. In the ar-Rummān area, 31 EB I sites including seven villages and one EB I fortified town (Jebel at-Tuwayn) were reported (2006: 52). Also, a survey in the Jarash region listed 38 Chalcolithic - EB II sites, including 25 attributed to EB I. It is worth noting that most of these sites were close to water sources, a pattern that is generally reported elsewhere for early EB I sites. In EB II the pattern changes radically, dropping from the total of 56 sites in EB I to ten in EB II. Overall, the data from the middle Wādī az-Zarqā' appear to fit the linear development of settlement patterns reported elsewhere. According to Douglas, it "fits perfectly with the results of several studies highlighting the shifting patterns of settlement during the Early Bronze Age in Jordan and Palestine" (2006: 53). The major problem, of course, is in the lack of distinction between early EB I and later EB I. Is there really continuity throughout EB I at these sites? Could many have been abandoned before EB II? Without more precise dating control we are left with a major concern of fitting the data to a preconceived hypothesis.

Other Dating Problems

Two other scenarios also raise concerns about our ability to interpret the changes taking place in the latter part of the fourth millennium. The traditional interpretation places the building of town walls at most sites in EB II. Yet there are a growing number of scholars who have argued for the appearance of town walls in late EB I (see Schaub 2007: 250 and sources therein). Among the possible sites listed are Beit Yerah, Tall as-Sa'īdiyya, Pella, Tall Abū al-Kharaz, Jericho, Tel Shalem, Aphek, Megiddo and Tell Sakan.

A second concern is the evidence that a series of sites underwent some sort of major burn or destruction in late EB I, Were the two connected? Destructions and then the building of town walls? Did the building of town walls provoke attacks and a battle over territories? Both of these scenarios are dependent on our ability to separate out the dating horizons of early EB I, late EB I and EB II. Calibrated C14 dates often give us – at best – a broad window of 100-300 years, hardly precise enough to establish a linked series of events. Despite many efforts to clarify the ceramic sequences (by Braun, Getzov, Yekutielli, Paz and Gophna, to name a few) the use of the terms early or late EB I (the current preferred terminology) and EB II remain troublesome in their lack of consistency. Pronounced regional differences remain and must be taken into account in comparative studies.

Dolmens and Grave Circles

A second striking, highly visible, example of the activity of fourth millennium inhabitants are the thousands of dolmens erected across the land of Jordan, especially on the eastern slopes of the Jordan valley. Since the nineteenth century these stone

monuments have fascinated scholars and visitors, who have made major efforts to record, describe, draw and photograph them. Efforts to interpret them have often foundered because of a lack of associated cultural material.

Several recent publications offer new insights into the challenging presence of the dolmens. Gaius Scheltema has provided a reliable guide to dolmens in a volume entitled *Megalithic Jordan* (2008). Scheltema discusses the types and construction methods of dolmens, as well the typology of standing stones with a full description of the major sites. Two articles in a recent issue of *Near Eastern Archaeology* also highlight the role of the dolmens. Steven Savage focuses on the Early Bronze Age site of al-Murayghāt, recounting fascinating early reports describing the site, and the results of the current Moab Archaeological Resources survey, which has documented approximately 100 dolmens in the surrounding area (2010). He also raises an alarm about nearby quarrying which threatens the integrity of the site. A second article by Abdulla al-Shorman provides GIS spatial analysis of dolmen locations, indicating that they "are found in statistically significant clusters located in a roughly north-south distribution on hillside terraces, primarily along the north and central Jordan Valley escarpment; a second series of dolmen clusters is scattered further to the east again along a north-south line" (2010: 48).

Dating the Dolmens

There appears to be a growing consensus that the dolmens date to the late fourth millennium. All three of the abovementioned authors propose EB I as the major chronological period associated with the erection of dolmens. The main evidence cited comes from a dolmen with EB I jars, juglets and bowls in the Damiyah field excavated by Yassine (1985) and a recently excavated megalithic tomb at Tall al-'Umayrī with 20 EB IB ceramic vessels (Dubis and Dabrowski 2002). There was no cap on the standing stones in the entrance of the al-'Umayrī tomb and I think some questions could be raised as to whether this is in fact a dolmen. Some EB IB round burial houses from Bāb adh-Dhrā' have standing stones flanking the entrance. Other survey evidence includes the dolmen field at ar-Rawḍa, at which EB IA and especially EB IB sherds have been found around the dolmens (Scheltema 2008: 89).

Function of the Dolmens

The great majority of investigated dolmens have turned out to be devoid of cultural material. This raises the question of their function. Many recent commentators have argued for a mortuary purpose. In 1995 Prag suggested that the dolmens of Jordan "...are the normal form for disposal of the dead of a large part of the population over a long period" (1995: 83). She argued further that the there seems to be increasing agreement that the dolmen cemeteries are those of tribal pastoralists who are in contact with sedentary groups, or who are themselves sometimes semi-sedentary or sedentarising, with cemeteries close to arable land and settlements. Philip and others have raised concerns about the pastoralist argument (2008: 194-195). We will return to this question in discussing the grave circles of Jordan.

Standing Stones or Menhirs

Standing stones or menhirs are found scattered across the landscape of Jordan as lasting visible sentinels of the presence of ancient cultures. Dating these stones has proved even more elusive than dating the dolmens. Some appear to go back to the Neolithic period. Some, however, are clearly associated with Early Bronze age sites. Distinctive groups of standing stones located on the Karak plateau and in the southern Ghawrs are clearly associated with EB sites. Albright found seven toppled menhirs next to the ancient site of Bāb adh-Dhrā' (1924: 6). Some were still there when Lapp excavated the site in 1965-1967. In the 1980s, a large standing stone dating to the Late Chalcolithic / EBI was recorded and excavated near adh-Dhrā' (Korber 1993). At Adir, Lajjūn and Khirbat Birgish other standing stones are related to EB sites. Dating of these standing stones ranges from EB I to EB IV (Philip 2008: 173).

Another lasting visible presence, less well-known, of the activities of the fourth millennium population consists of hundreds of grave circles, many with dolmens inside, found dotting the ritual landscape of Jordan. In a recent article, I used the term "ritual landscape" to embrace three distinctive ecological regions identified by the research of Udo Worschedh on grave circles (Schaub 2009: 751). The regions were (1) the Ghawr plain near the Dead Sea, (2) the hilly slopes to the east and (3) the top of the Jordanian plateau. The grave circles in all three regions appear to represent a common burial

tradition shared by their inhabitants. In the Ghawr, Clark (1979) and McCreery (1979) excavated 14 of the grave circles located in Sahl adh-Dhrā' south of the Bāb adh-Dhrā' cemetery. Skeletal material was poorly preserved. Burials were all secondary, disarticulated and incomplete, with a total absence of grave goods. Similar results were found by Worschech, who excavated nine of the 136 grave circles recorded during his surveys (1985a, 1985b, 1986, 2000). Dating of the circles has ranged from the Late Chalcolithic to EB I periods.

The consistent combination of fragmentary skeletal material – or, in many instances, none at all – with no grave goods raises the possibility that some of these circles may have once been used as primary burial sites for an interim 'liminal' period. Once the flesh had been excarnated, the bones were gathered to be transported to a secondary, final resting place where grave goods were deposited, e.g. the cemeteries of Bāb adh-Dhrā', Fīfā and aṣ-Ṣāfī / an-Naq' in the south and the huge cemetery of Adeimeh north of the Dead Sea.

The EB I tombs at these cemeteries are underground and are not visible sentinels, but their discovery and excavation over the past forty years has raised many questions about the late fourth millennium and even perhaps a solution to the dolmen and grave circle problem. The size of these cemeteries appears to go far beyond the death rates for a local population (Schaub 2009: 748). However, if the region served by the cemeteries extends to the highlands and a sufficient period of time is allowed for their use, the data make more sense. In fact the extended length of the EB I period from 3600 to 3000BC, with at least 300-400 years assigned to early EB I, is certainly an acceptable range for the cemetery data and estimates of the local population.

The inhabitants of Jordan in the second half of the fourth millennium were very busy people. We do not know who they were or whether they were local (most probably) or came from the north (as some have suggested). But we can admire the sheer physical impact of their activity and the degree to which the pre-existing landscape they encountered would have been modified. In summarizing their contributions G. Philip has written: "The highly visible Early Bronze Age modifications were deliberate constructions, and created a landscape that has been formed by human choices and action, and the development of which was open to day-to-day perception and judgment. From the late fourth millennium BC onwards, the inhabitants of Jordan would have moved within a landscape much of which originated in the Early Bronze Age ... it can be suggested that the Early Bronze Age sees the inscription into the landscape of both living groups and their past, through the creation of a world in which space was structured by highly visible human creations" (2008: 197).

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