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# **The later prehistory of the southern Levant: issues of practice and context**

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## **1. Introduction**

The workshop published here was intended to improve our understanding of the developments during the 6<sup>th</sup> through the mid-4<sup>th</sup> millennia BC. Accordingly, it was focused upon two key transitions. The first, the transition from the final phase of the Neolithic to the early phase of the Chalcolithic, is now generally dated to the early 5<sup>th</sup> millennium cal BC. The second, that from the Chalcolithic to the initial phases of the Early Bronze Age falls in the early centuries of the 4<sup>th</sup> millennium BC. The intervening period is occupied by a developed phase of the Chalcolithic often termed the “Ghassulian Culture” (Bourke 2008, for a recent summary). The second transition has recently been termed the “End of Prehistory” (Joffe *et al.* 2001), and there is now a range of evidence which suggests that Early Bronze Age communities were organized along rather different lines from their predecessors (Philip 2008).

Participants were asked to provide ways to move beyond traditional debates, and ask new questions concerning developments in the 5<sup>th</sup> and 4<sup>th</sup> millennia cal BC. The editors have invited me to review the extent to which these hopes have come to fruition, and to consider the range of ideas that have emerged from discussion. I will also consider areas within which progress is less apparent, and make some suggestions as to why this might be. In addition, I will try to place the periods concerned, and some of the issues raised by the papers in this volume, in a wider context. In pursuing this I will make some brief comparisons between work on the later prehistory of the southern Levant and research on earlier and later periods in the region, and with the current research on prehistoric societies elsewhere in the Middle East. I will also suggest that we might usefully consider new types of narrative, touch upon issues arising from current archaeological practice, and possibilities apparent from current developments in the wider field of prehistoric archaeology.

### ***The later prehistory of the southern Levant: regional context and disciplinary impact***

The discovery shortly after World War II of convincing evidence for early agricultural settlements at sites such as Jarmo and Jericho placed near eastern prehistory firmly within a global-scale narrative, that of the emergence of agriculture. Since then, the growing quantity and quality of the primary

evidence for early sedentary communities in the southern Levant (e.g. Bar Yosef and Gopher 1997; Byrd 2005; Finlayson and Mithen (eds) 2007; Kenyon and Holland 1981, 1982, 1983), and the existence of an ample supply of accessible summary literature (Bar Yosef and Meadow 1995; Kuijt ed. 2000; Rollefson 2001; Simmons 2007) has ensured the region's place in global prehistories (Clark 1977; Mithen 2003; Scarre ed. 2005).

The region's later prehistory has received far less attention. In contrast to extensive discussion of Aceramic Neolithic communities, the ceramic Neolithic does not feature in the accounts of Mithen (2003) or Watkins (2005), both of which are set within major volumes intended to provide a global overview. In practice, as far as general accounts are concerned, discussion of the later prehistory of the Middle East has traditionally been dominated by the Mesopotamian evidence. This trend is exemplified by Matthews (2005) whose account of the "rise of civilization in southwest Asia", is in-effect a follow-on to that of that of Watkins (2005) mentioned above, yet makes no mention of the Levant prior to the Bronze Age. This is no real surprise given the number of substantial region/period overviews of the Mesopotamian evidence published in recent years (e.g. Algaze 2004; 2008; Rothman ed. 2001; 2004; Pollock 1999; Charvát 2002; Matthews 2000, 2003). Collectively, these accounts provide a rich source of information, much of which has been arranged around a series of important themes (e.g. the development of complex societies, the growth of bureaucracy, urbanization, the scale and form of long-distance contact) which allow the mass of data to be arranged in a comprehensible manner. In addition, the last two or three years have seen the publication of thematic volumes addressing topics such as prehistoric ceramics (Nieuwenhuys 2007) and textiles (Breniquet 2008). This material has contributed greatly to the impact that Mesopotamian archaeology has had in shaping the understanding of the development of complex societies among the wider subject community.

The later prehistory of the Levant was, of course, accorded more detailed discussion by Mellaart (1975, 227-243). However, in keeping with the aims of this still-fundamental text, his discussion was largely focused upon the description of material assemblages, their space-time systematics and generalised consideration of regional interaction. Such dedicated volumes are rare, however, and the later prehistory of the southern Levant has more often been covered in multi-period regional accounts, which generally prioritize the evidence for the 2<sup>nd</sup> and 1<sup>st</sup> millennia BC. The latter is, of course, of interest to a wide audience including: Biblical scholars, Egyptian archaeologists, ancient historians and specialists in the ancient Aegean and Mediterranean. The very titles of many such volumes (Kenyon [1979]; Mazar [1990]; Ben Tor (ed. ) [1992]; Levy (ed.) [1995]), which reverberate with terms such as "Holy Land", "Land of Israel", and "Bible" or "Biblical" serve to cast the later prehistory of the region as a kind of extended prologue, something to be covered almost through a sense of obligation.

Why does the evidence from the southern Levant "drop out" of wider narratives towards the end of the Aceramic Neolithic? Admittedly Mesopotamia covers a much larger area and there have been numerous

research projects working there in recent decades. However, the southern Levant is a well-studied region, and while excavations have been fewer in total than in Mesopotamia, they are more densely distributed across the landscape, and the material is generally more accessible for study. Moreover, I would suggest that in terms of data, for example the final publication of recent field projects (e.g. Barker *et al.* 2008; Garfinkel and Miller 2002; Garfinkel and Dag 2008; Scheftelowitz and Oren 2004; van den Brink and Gophna 2005), and the availability of palaeoeconomic and paleoenvironmental data, the Levant is quite well served (e.g. Hill 2006; Hunt *et al.* 2007; Kuijt *et al.* 2007; Rosen 2006). Despite this, however, the evidence from the region has played relatively little part in wider debates.

An obvious answer is that as far as the southern Levant is concerned the Ceramic Neolithic and Chalcolithic periods fall between what have been arguably the two main foci of archaeological research in recent years. The first of these, early sedentism and the domestication of plants and animals, with all its implications for social and economic organization, is concerned primarily with the study of Aceramic Neolithic societies, and is thus focused upon the 7<sup>th</sup> millennium cal BC and earlier. The second, the development of complex societies, early states and urbanism, has tended to focus on the 4<sup>th</sup> and 3<sup>rd</sup> millennia BC, with discussion of the evidence from earlier periods focused upon the perceived south and north Mesopotamian “cores”.

But the gap is not only a temporal one. Researchers working on early sedentary communities and those studying complex societies have each created, not just a dense network of data, but a set of theories and concepts through which debate has been conducted, and themes around which the mass of evidence can be organized. Through this process our understanding of these periods has been modified substantially in recent decades. However, the period in-between, which is the subject of this volume, appears to lack a group of unifying themes of the kinds which provide strong research cores for these other areas. Thus, to some extent it sits within an intellectual “gap” between these lively fields of debate, and as the editors observe, “scholarly discussion has often prioritized the definition and redefinition of “archaeological cultures”, and matters of chronology and terminology”. In this light it is telling that the “chiefdom” concept, first introduced to discussions of Levantine prehistoric societies more than twenty years ago (Levy 1986) still remains the closest thing to an anthropological framework in common usage.

### ***Nomenclature***

The terminology used for the Neolithic and Chalcolithic periods is a case in point. Many of the key themes such as domestication, and the social and conceptual implications of sedentism can usefully be investigated across extensive territories (Colledge *et al.* 2005; Colledge and Conolly 2007; Hodder 2007; Larson *et al.* 2007; Watkins 2004). Accordingly, the main phase terminologies associated with the Aceramic Neolithic are applied Levant-wide despite the existence of regional distinctions in material culture (e.g. Kozłowski and Aurenche 2005). Equally, for the Early Bronze Age a set of successive chronological phases numbered EBA I-IV is employed across the southern Levant (except for in the arid zones – Rosen [this volume]), and less

consistently in south and west Syria (compare Braemer [2002; 10, Tab.3] and Mazzoni [2002] with Akkermans and Schwarz [2003, 215, 236]).

However, in the case of the Ceramic Neolithic and Chalcolithic of the southern Levant, the material has traditionally been discussed in terms of a number of chrono-stratigraphic units defined on the basis of material culture. These are generally equated with traditional “archaeological cultures”, and remain at the heart of even recent overviews, most of which are substantially devoted to their characterization and the clarification of their chronological relationships (Garfinkel 1993; Gopher 1995; Gopher & Gophna 1993; Gilead this volume). From these accounts it is apparent that these cultures provide not only the basic organizational structure for the data, but also a key element of the research vocabulary.

## **2. The “Archaeological Culture” as a mode of analysis**

From the standpoint of a researcher working in a British university, one of the most striking elements of the papers in this volume is the extent to which a normative or essentialist notion of the “Archaeological Culture” (Childe 1956, 123) continues to play a central role in discussion. Some papers seek to identify and refine archaeological cultures (e.g. Gilead, Kafafi this volume), others refer to “type-fossils” as characteristic of a particular chronological or cultural phase (Milevski *et al.* this volume), while some cite population movements as explanations for the appearance of new material (Golani and Nagar this volume). All of these are consistent with classic culture-historical practice, and while some claim to conceive of cultures mainly as units for organizing the data, many contributors at least implicitly follow Childe (1933, 198) who stated that, “Culture is a social heritage; it corresponds to a community sharing common traditions, common institutions and a common way of life”. Many contributions (e.g. Milevski *et al.*, Gilead, Roux *et al.*; Rosen this volume) refer less directly to Childe than to Clarke’s (Clarke 1978, 247) reformulation of the concept of the archaeological culture, which allowed for material culture distributions which were overlapping but not congruent. However, the widely recognized problems with the whole concept of the archaeological culture (Trigger 1968, 530; also see Shennan 1994, 5-14, for a more recent summary of critiques, with references) go largely unremarked.

As Trigger (1978, 86) has pointed out, the culture-historical approach grew out of the need to classify the space-time variability that was apparent within the archaeological record, a statement consistent with the views of several contributors. The initial phase of prehistoric research in the Middle East brought to light a past for which no ready interpretational framework existed (Wengrow 2006, 190), and which was therefore partly defined by the absence of a range of features (e.g. writing, cities), which were readily observed among later societies in the region. Given this situation it is no surprise that scholars adopted the standard disciplinary practices of the mid-20<sup>th</sup> century AD (see below).

Despite its limitations culture history continues to be the preferred analytical framework within many regional traditions (Ucko 1995, 5), suggesting that it

produces outcomes sufficiently useful to make it “fit for purpose” in the eyes of many users. However, Ucko (1995, 11) also notes that its persistence cannot be attributed to the same reasons in each case. Among the reasons he lists are: a focus upon the collection, organizing and ordering of data; a desire to create models of the past that support present-day identity claims or which provide “unproblematic” narratives for those seeking to write a national “prehistory”; a general suspicion of theory. The present account will, hopefully begin to explore the particular reasons for its persistence in the southern Levant. Reading Gilead’s (this volume) contribution one might suspect that a desire to retain the place of artefact data at the very centre of analysis has played an important part.

### ***Cultures as legacy***

In this particular case, I would suggest that the tenacity of “cultures” within the accounts of the Ceramic Neolithic and Chalcolithic results from a combination of factors. Firstly, at the time when pioneering scholars such as Stekelis (1950-51; 1972), de Vaux (1970, 1971), Perrot (1968) and Kenyon (1960) were laying the foundations of our knowledge of the later prehistory of the Levant, the concept of the “archaeological culture” was current within archaeology, and widely employed by authorities such as Childe (Rowan and Lovell with further references). In the Middle East generally, prehistory was a relatively late addition to an archaeological tradition that had taken shape around the evidence - tombs, palaces and tablets - of the ancient civilizations of Egypt and Mesopotamia (Wengrow 2006, 189). This characterization is also apt for the situation in southern Levant, where a relatively small group of prehistorians worked within a disciplinary field dominated by scholars dealing with the archaeology of the Bronze and Iron Ages. For the latter, the notion of bounded archaeological cultures appeared compatible with a historical narrative expressed largely in terms of the rise and fall of regional and “ethnic” polities, and whose reconstructions sought to characterise broad regional phenomena. In this situation, a normative approach to the material evidence appeared eminently suitable.

It should be no surprise then that material culture was used to define chrono-stratigraphic groups which were generally equated with “archaeological cultures”, and that following Childe (e.g. 1956, 135) these were taken as representative of past societies. In addition, a particularly striking feature of later prehistoric material assemblages in the region was pottery, a body of material which offers real scope for the incorporation of variability, and so lends itself very well to classification on stylistic grounds. This was, of course, the very practice which underlay the definition of cultural units. However, as Anfinset *et al.* (this volume) observe, the focus on pottery may have led scholars to neglect other aspects of the evidence.

Many of the basic culture-groups such as the Yarmoukian (Stekelis 1950-51, 1972), Wadi Rabah (Kaplan 1958a, 1958b) and the Ghassulian (Neuville 1930) entered the discussion many decades ago, and were defined on the basis of what is now best termed “legacy data”. That is, material much of which is now viewed as unreliable for reasons such as: suspect stratigraphy, selective reporting of finds, a focus on painted ceramics to the neglect of

undecorated material, inadequate publication, weak stratigraphic or chronological control. It should come as no surprise therefore, that despite a continuing emphasis on the role of ceramic typology, it has not always been easy to incorporate more recent evidence within older frameworks. Thus attempts during the 1980s by Hanbury-Tenison (1986), and by Helms (1987, also in Betts ed. 1992) to demonstrate continuity across the Chalcolithic-EB transition, were ultimately frustrated, not only by inadequacies in the dataset, but by the fact that the organizational units which provided the vocabulary for debate were themselves inextricably bound to existing interpretations.

### ***Aspects of current practice***

Scholars have continued to define new “cultures” such as the Besorian (Gilead 2007) and the “Qatifian” (Goren 1990), although the latter has not found universal acceptance (Bourke 2007, 29). Moreover, the contributions to this volume highlight the fact that the Wadi Rabah Culture, while defined by Kaplan (1958a, 1958b) half a century ago, and still prominent in the literature, has proved difficult to discuss in a way that is acceptable to the research community as whole. Nor do the various “cultures” comprise units that are directly comparable. Some, the “Ghassulian” for example, are deemed to embrace sites and phases across much of the southern Levant, while others, such as the Besorian (Gilead 2007) or the recently proposed “Esurian” (Yannai 2006, 275) are more confined in both space and time. The resulting mosaic of entities and variants presents scholars with a framework that is very different from that provided by the overarching regional units identified in both earlier and later periods.

Also relevant is Rosen’s (this volume) observation that arid zone cultures, previously defined on the basis of distinct chipped stone “industries” may well be artefacts of particular techniques of lithic analysis. He further observes that, while the “Timnian” of the Negev can be said to conform to Clarke’s (1978) definition of an “archaeological culture”, the two ends of this very long temporal trajectory are quite different, and there is no reason to assume the maintenance of a single distinct “Timnian” identity throughout.

Clearly the widespread retention of the culture concept does pose certain problems. The relevant issues have been usefully summarized by Johnson (1999, 16-17), who notes that when artefacts are taken to express cultural norms, this leads to the definition of groups of an idealized nature. Firstly, the resulting focus upon difference emphasizes the peculiarities of individual cultures, rendering it hard to identify and discuss elements that are shared between cultures. Secondly, normative cultures tend to be viewed as relatively stable entities, and so when a period of time is presented as a succession of cultures, it can be hard to discuss change and transition, except in terms of the replacement of one unit by another.

This second issue is particularly apparent in articles which focus upon demonstrating the differences between cultural groups (e.g. Gilead 2007; this volume), and is implicit in others. One result, as Johnson (1999, 16-17) observes, is to create the kind of poorly-defined transitional periods that represent a major focus of this volume. While often no more than the

boundary zone between two arbitrarily-defined, and highly abstracted cultural units, such “transitions” are often viewed as periods of instability and rapid change. However, this view has tended to reduce the visibility of change *within* “better-defined” periods, a point recently made by Campbell (2007) with respect to the archaeological units commonly used in discussions of Mesopotamian prehistory.

The importance of type-sites to the definition of “cultures” is underscored by the use of nomenclature such as Ghassul(ian), Timna(in) and Besor(ian). However, the role of type-sites in setting the expectations of a later prehistoric “culture” is crucial. In fact, some are poorly dated, some were poorly excavated or published, while others produced quite small datasets, with the resulting material cultural entities created by the addition of supposedly representative material from yet other sites (for further discussion see Clarke *et al.* [2007, 14]). Campbell and Fletcher (in press) have argued recently for Neolithic North Mesopotamia that “a very restricted group of classic type sites in Iraq fundamentally influenced the chronological divisions across northern Mesopotamia ----. If we accept that our traditional chronological structure is created by the slightly random choice of the initial range of excavated sites, then there is at least a possibility that questions which are generated by that structure may be misleading”. In this light, Lovell’s (2001, 50) suggestion that Teleilat Ghassul, type-site for the supposedly well-defined Ghassulian, may itself be atypical, might suggest that we would do well to review some of our core assumptions.

Anfinset *et al.* (this volume) highlight another problem when they note that practice in the southern Levant generally conforms to what Dobres (1999, 13) terms “normative research”, in that site-specific patterns of artefact variability are employed to describe ways of life on a regional scale. This process is facilitated by the prevalence of “cultures” which act as an intermediary “black box” allowing analysis to jump from the detailed material culture record to more generalising statements. Two particular outcomes of this process are of concern. Firstly, by becoming “cultures”, what were ostensibly classificatory entities are treated akin to active agents, and become the building blocks around which narratives are constructed (Pluciennik 1999, 660). Secondly, by framing our narratives around high-level abstractions, we risk losing sight of the variability present within the primary data.

The result has been that our organizational units have come to shape, not only our terminology, but scholarly expectations, the very questions asked by researchers, and the narrative structures deployed in writing accounts of Levantine prehistory. However, if, as Burton and Levy (this volume) argue, “individual communities typically cycle through asynchronous phases of establishment, expansion and decline”, and excavations tend to produce more data from some occupational phases than others, then the culture model risks creating macroscale narratives through the combination of evidence drawn from quite different stages of the developmental trajectories of individual sites.

While the foregoing suggests that interpretation has in many respects adhered to traditional modes, the field of Levantine prehistory was certainly



open to external influences and witnessed a substantial uptake of new methodological developments such as geophysical survey, and palaeo-environmental investigations. It is useful that we try to understand how this situation came about, and why approaches currently favoured in Americanist archaeology, or the more theoretical end of European and Mediterranean prehistory, perhaps exemplified by the *European Journal of Archaeology* or the *Journal of Mediterranean Archaeology* appear to have had a limited impact in the region. Of course, a full-scale analysis of the issue lies beyond the scope of the present paper, so I will restrict myself to making a few specific observations.

Some pointers might be drawn from a recent paper by Bernbeck and Pollock (2004, 338-340) who have argued that two distinct research traditions can be distinguished among foreign archaeologists working in the Middle East. The first which they term “Europeanist”, is characterized by a close interest in historical problems and often finds expression through long-term projects based upon a single site or region. Such approaches accept that knowledge is built incrementally, and that the accumulation of evidence is itself of value, even if a considerable amount of this may appear of limited immediate use. The second tradition, which they term “Americanist” (perhaps better termed “Anglo-Saxon” as it applies also to projects funded from British, Canadian and Australian sources), is more closely allied to the social sciences. Research tends to be problem-orientated, with an interest in processes, or structures. Importantly, data collection is designed to address specific research questions, often of a type likely to be relevant to a range of researchers, including an audience beyond others working in that specific sub-discipline or region. Fieldwork projects are often of limited duration, more focused, and the results are expected to have an impact upon the field which is apparent within a limited timescale

Using the terms of Bernbeck and Pollock (2004, 340) the approaches favoured by many archaeological projects in the region, including locally-based and those run in collaboration with overseas institutions, are aligned with the “Europeanist” model. Its historical orientation fits well with local agendas, while researchers involved in long-term field projects are well positioned to gain a genuinely detailed knowledge of the regional material culture: the high priority assigned to long-term excavations at major Bronze and Iron Age tell sites is a case in point. However, the kind of theoretical literature noted above, while integral to “Anglo-Saxon” research frameworks, is perhaps of less obvious value to scholars working within traditions where priorities differ.

### ***Cultures and transitional periods***

Some contributors (e.g. Milevski *et al.* this volume) appear to conceive of periods as comprising distinct entities, characterised, if not by cultural norms, then by specific socio-economic structures as a result of which material cultural preferences are shaped. Gilead’s remark (this volume) that the transition between “Besorian” and “Ghassulian” is marked by “a profound technological, typological and aesthetic change” provides a good illustration. Clearly if the data is organized into cultures, then the change detectable within

the material record must be understood as that between cultures, which are seen as periods of stasis separated by “transitions”, for example that from the Chalcolithic to the EB I period. These are exactly the problems raised by Johnson (1999, 16-17). Moreover, groups of material that appear to share elements of both earlier and later cultures, and to thus conflict with expectations, can be dismissed as “mixed”.

However, Braun (this volume) and van den Brink (this volume) have now documented sufficient elements of continuity between the Late Chalcolithic and early EB I to show that the assemblage generally understood as “early EB I” took shape gradually during the earlier part of the 4<sup>th</sup> millennium cal BC. Moreover, those features which were to become most distinctive of the period can be shown to have appeared at slightly different temporal points in the process. This suggests that rather than seeing one culture as replacing another, we would do better to view the changes detectable in the archaeological record as evidence for complex, multidimensional transformations of the relationship between people, and with their environment and a range of material resources. This suggestion builds upon the idea that, “culture” is not fixed, but is constantly being brought into existence through the lived performance of daily practice, much of which is mediated through the use of material objects (DeMarrais *et al.* 1996).

Returning to the matter of the Chalcolithic-EBA transition, it is interesting that the issue is likely to be resolved, not through discussion and debate, but by acquisition of new data, in particular from the early and mid 4<sup>th</sup> millennium cal BC deposits at sites such as Ashkelon Afridar and Mod’in (Braun and Gophna 2004; Braun this volume; van den Brink this volume). Van den Brink (this volume) notes that the various phases of occupation at individual sites provide merely synchronic snap-shots of slightly different points within a continuum of development. It should be obvious therefore, that models which seek to assign such snapshots to one or other of a limited number of large-scale chrono-stratigraphic units, will reduce the explanatory potential of the evidence by replacing the continuity present in the data with a break created by the model itself.

That said, while the evidence in favour of gradual change appears increasingly plausible, in order to demonstrate such changes convincingly we need to be more explicit about the nature of the contexts from which key material derives. Researchers must also be sensitive to the degree to which residual material may complicate the situation on sites with long occupational sequences (Peltenburg *et al.* 2003, 258). Thus, while excavation reports now increasingly include an appendix containing descriptions of the individual contexts or loci, it is not always clear to what extent this evidence has informed the discussion of artefactual data, which is all too often still presented by phase or stratum, rather than by individual deposit.

### ***Chronology and the use of radiometric dating***

The region / period overviews of the late 20th century (e.g. Gopher and Gophna 1995; Hanbury-Tenison 1986; Stager 1992) were held back by the lack of a *reliable* absolute chronology. However, a growing corpus of good

radiometric dates linked to sound stratigraphic sequences at sites such as Teleilat Ghassul (Bourke 2007, 26); Wadi Ziqlab (Banning 2007a), Tell Abu Hamid (Lovell *et al.* 2007, 57-59) and sites in the Wadi Beersheba (Burton and Levy this volume) means that the absolute chronology of the Ceramic Neolithic and Chalcolithic is now much clearer than was the case even a decade ago.

Radiometric evidence now indicates that the material termed Chalcolithic is unlikely to continue beyond 3800 cal BC (Bourke *et al.* 2004; Burton and Levy 2001; Burton and Levy this volume), and that the material assemblages taken to characterize the initial phase of the Early Bronze I period were in use by 36-3500 cal BC at Afridar (Segal and Carmi 2004, 119-120, Braun and Gophna 2004, 220-224), and Tell esh-Shuna (Bronk-Ramsey *et al.* 2002, 83-84). Rosen (this volume) has shown, using radiocarbon evidence, that various elements traditionally lumped under the term “Timnian” appeared at different times. Thus he demonstrates not only the extent of diachronic variability within steppe lithic assemblages, but also the contemporaneity of quite distinct material culture assemblages in the Mediterranean and steppe zones. We may soon be able to test Bourke’s (2007, 28) suggestion that regions within the Mediterranean zone might also have developed at rather different speeds.

However, despite recent discussion (Banning 2007b), there are substantial variations in the ways in which radiocarbon dates are used by contributors. It is important that scholars are aware of problems inherent in the manipulation and grouping of radiometric dates, if we are to exploit the full potential of the growing date-corpus. When dealing with groups of dates we should note the cautionary remarks of Bronk-Ramsey (2005) to the effect that “Combination of dates should clearly only be carried out if there is good reason to assume that the events being dated all occurred within a short period (“short” here implies small in comparison to the errors associated with the dating methods)”. The danger inherent in averaging dates, in particular when done without a clear understanding of the chronological and contextual relationships between the various samples, has been well illustrated by Millard and Wilkinson (1999). Given the nature of averaging as a procedure, it is unsurprising that the outcome is diagrams which show the dates for each archaeological culture forming a distinct cluster, clearly separated from the dates from earlier and later cultures (e.g. Gilead, this volume, [Figure 2.3](#)). In fact, the apparently stable bounded entities which emerge are simply a product of the methods used, as the averaging procedure does to dates what the creation of normative cultures does to artefactual data. Such a procedure can hardly stand as a validation of the existence of cultures.

Related criticisms can be levelled at the treatment of dates by Shugar and Gohm (this volume). Radiocarbon dates should only be combined if (a) there is some *a priori* reason to believe that they represent the same point in time, and (b) they are statistically indistinguishable. The fact that dates satisfy condition (b) is not sufficient in itself to justify this procedure. The method of assigning sites to two-hundred year sub-periods on the basis of radiocarbon

dates also appears problematic (Shugar and Gohm, this volume [Table 10.2](#)). The calibrated date is a probability distribution and the range (whether expressed at one or two sigma) is simply not a reliable means of deciding which of the bicultures it is most likely to belong to. For example, RTA-4506 the first date in Shugar and Gohm's [Table 10.4](#) (this volume), when calibrated has a 95% range of 3630 to 3368 BCE, and so apparently a near-equal split of 130 years before 3500 and 132 years after 3500. However, the probability plot shows that around two-thirds of the probability falls after 3500 cal BC. Moreover, many of these sites are complex and long-lived and even when dateable material is closely associated with metal artefacts, this would date not their production and use, but their final deposition.

Banning *et al.* (this volume) demonstrate, using a Bayesian approach (Buck *et al.* 1996; Philip and Millard 2000), how one might undertake a sophisticated diachronic study of localised developments using less than ideal datasets. In a similar way Banning (2007a) has used Bayesian analysis of radiocarbon dates to establish the chronological positions of a variety of archaeological "entities" including both traditional "cultures" and individual phases at specific sites, some of which had previously proved hard to place on material culture grounds alone. The construction of chronologies on the basis of radiometric dates, rather than through claimed material culture parallels, renders it possible to establish the temporal relationships between individual stratigraphic units, without the circularity inherent in typology-based schemes. The recognition of this fact is the first step towards moving discussion away from pre-determined chrono-stratigraphic blocks, and towards viewing the evidence from individual sites and regions in all its complexity and contradiction. Bayesian analyses are an invaluable aid to the systematic, comparative analyses of archaeological evidence at the inter-site scale, that is necessary if we wish to write macroscale accounts without recourse to traditional "cultures".

Of particular value will be the opportunity of examining separately the chronological development of different components of activity and material culture. This will allow us to assess whether changes in different fields of action were genuinely contemporary, and whether these might indeed form closely-linked "clusters" of activity. It will also allow us to investigate the degree of variability between synchronous communities, the significance of differential rates of development around the region, and the relative timing of different communities' decisions regarding specific technical or material innovations. In effect, it will allow us to ask more sophisticated questions by accessing a richer and more complex range of archaeological evidence.

### **3. Towards an alternative framework**

My own view is that we need to move away from working with pre-defined chrono-stratigraphic units, and focus attention on the transformation of material culture through human action. However, this is best argued through a consideration of the possible value of alternative approaches to the south Levantine dataset. In this context, it is possible to identify a number of issues, which if examined in detail, might provide rather more finely textured interpretations.

Environment and subsistence practices, while studied and reported, have not always been well integrated with the wider discussion of community structure, organization and reproduction. It is striking, for example, that few of the contributors (but see Roux *et al.* this volume) have explored the implications for human activity of recent environmental evidence (Brooks 2006; Robinson *et al.* 2006; Rosen 2006). Of course, archaeologists should be wary of resorting to environmental determinism, but Rosen (this volume) demonstrates that while the environment sets certain constraints upon the range of behavioural possibilities consistent with sustainability, the record of human groups in the arid zone is not lacking in internal variability. In practice, a community's response to an environmental threat such as drought, or to a new opportunity such as the availability of copper tools, will almost certainly be contingent upon a set of very localised concerns, including the way that the threat is perceived (e.g. as a regular, if unfortunate, event, as opposed to, say, an act of divine retribution), and the degree to which the responses available are attractive to the community's main internal groupings. Consequently, there may be considerable diversity in the form and timing of different communities' responses to a particular opportunity or threat.

The very divergence of these responses may be an important driver of change. Some communities within a region might respond to a period of localised drought by changing cropping patterns or investing in improved water management technology, some might choose to retain their traditional ways and adjust population levels to reduced yields, while others might fission, forming smaller groups and adopting a more extensive resource procurement strategy. While there may be several workable responses to such a challenge, the particular route taken is likely to involve changes in the nature of the relationships of the community concerned with the landscape. Moreover, when the period of drought ended, the members of the various communities might find that as a result of their divergent strategies, they were in rather different positions with respect to their levels of access to key resources.

The relevance of the above is that during the 6<sup>th</sup> through 4<sup>th</sup> millennia cal BC, communities in the southern Levant had to engage with a range of new opportunities, any one of which had the potential to cascade change through society. These included: the cultivation of olives and the production of olive oil (Lovell 2008 for a recent overview), the increasing adoption of woollen textiles *via* the appearance of wool-bearing sheep (Grigson 2006; Levy *et al.* 2006), the increasing availability of copper (Golden *et al.* 2001; Shugar 2001) and the domestication of the donkey (Grigson 1995; 2006, 224). The period also saw the appearance of both substantial individual settlements such as Teleilat Ghassul, and settlement concentrations, for example that along the Wadi Beersheba (see Bourke 2008, 114-117).

If we set aside cultures and instead imagine a mosaic of communities, each grappling with a complex range of possibilities, we might think that the kinds of development noted above would form useful entry points for the investigation of change. By way of an example it seems reasonable to

enquire what the demonstrable changes in settlement size and subsistence regimes might have meant for the relationship between people, animals and land? Changes in crops and herd structures would surely imply changes in the valuation of different tracts of terrain, and in patterns of access to resources such as land and water a point made recently by Philip (2003) with respect to changes in the economy detectable during the later 4<sup>th</sup> millennium cal BC.

Another obvious gap is in the appreciation of the relationship between people and livestock in shaping past societies. In addition to their obvious role within food systems, domestic animals provide an important link between human groups at both intra and inter-community scales. Robb (2004, 135-6) makes the interesting point that in prehistoric communities the herd of domestic livestock controlled by many individual households would have been too small to be demographically viable over the long-term, necessitating a larger biological herd comprised of various smaller social herds, with livestock circulating between households. This situation would have been especially pronounced in the case of resource intensive species such as cattle, animals which are present at many sites in the southern Levant, albeit in varying proportions. Thus cattle may have played an important role in social relations, well beyond their apparent value for subsistence and traction.

In a related issue, scholars have not really considered the social and political implications of evidence pointing to the very variable role of pig as a source of meat at Chalcolithic and EB I sites (Anfinset *et al.* this volume; Croft 1994; Grigson 1995, 254-255). Domestic pigs tend to live close to a settlement, unlike caprines which are amenable to being herding across the landscape. Thus the contrast between the manner in which each species is best managed, and the relationship between herding practices and matters of territory and distance may have given them very different social values, perhaps even ideological characteristics. These processes are likely to have contributed alongside local environmental affordances, to the shaping of social attitudes to meat consumption within different communities. If the great predominance of caprine remains and virtual absence of pig bone in what appear to be EB I cultic deposits at Megiddo (Wapnish and Hesse 2000), are indicative of the dietary preferences of the gods, one might wonder what this meant for the status of those communities wherein pig-raising and pork consumption featured strongly. A discussion along these lines opens-up a range of interesting ways to integrate studies of environment and economy with matters of status and ideology among past communities.

### ***Scales of analysis and the role of communities***

While the distinctive nature of the Chalcolithic material culture attested in the Jaulan is now well documented (Epstein 1998), and its place as one of several regional Chalcolithic variants widely remarked (Gonen 1992; Levy 1995; Kerner 2001), the significance of this difference has been less thoroughly explored. If for example, Chalcolithic copper objects circulated in the context of some kind of prestige-goods system (Kerner 2001; Levy 1986; 1995), then the virtual absence of such artefacts from excavated settlements

in the Jaulan (Epstein 1998) might suggest that that these communities differed markedly from contemporary societies elsewhere in the region, both internally, and in the way in which extra-regional relationships were conducted. To echo the work of John Barrett (1994) on prehistoric communities in Britain, we might ask what the evidence can tell us about the way in which communities in the Jaulan responded to the challenges posed to them by the particular natural and social environment of their upland landscape, how this compared with the behaviour of contemporary groups in the various lowland environments, and how communities related to each other. We would also wish to understand the time-trajectories of individual communities in terms of their changing relationship with the natural and material world. In this way we may begin to distinguish between elements of change that were constituted at a local level, and those which were spatially more extensive.

When “cultures” become the actors, as in many macroscale narratives (Pluciennik 1999, 660), then the story of individual communities becomes part of, and is effectively submerged within, a common narrative. As our data takes the form of interlinked sets of evidence generally drawn from individual space-time loci, it seems almost perverse to abandon specifics at an early stage in the process of interpretation. Pluciennik (1999) argues that the source material necessary for the construction of microscale narratives is best sought at the level of individual sites [or occupational phases], and that this approach requires us to emphasize the historically specific, and thus investigate the small-scale localised events from which larger patterns might be constructed. Thus, if our narrative framework and analyses are set exclusively at the macroscale, then our interpretations will be restricted to this scale. If, however, we wish to produce more nuanced narratives, developed from the bottom-up, we need to think in terms not of “cultures”, but of a mosaic of communities, each grappling with a complex range of possibilities. These communities would have existed within variably-composed local clusters, linked by dense, routine interaction, but also a multi-scale set of more dispersed networks (in both spatial and temporal terms), mediated through a complex range of persons and materials.

An example of such an approach is that of Hodder (2006) at Çatalhöyük, who provides a richly textured account of an individual community in its own terms with only modest reference to contemporary sites. Core to his interpretative framework is the concept of agency. In fact, Barrett (2000, 63) has suggested that narratives which mark the passing of time without referring to agency work at a level of abstraction in which “economic processes operate without labour, ideologies arise without the struggle to maintain belief”. In practice, few sites excavated in the southern Levant have benefited from either the exceptional preservation encountered at Çatalhöyük, or the level of support required to facilitate the scale and highly intensive nature of that particular excavation.

However, that said, I am not certain that current archaeological practice in the region is suited to such high-density analysis, although the southern Levant is far from unique in this case. In fact, a recent overview of practice in British

prehistory (Jones 2002, 51) has pinpointed a number of issues which appear germane to the southern Levant. Among other things, Jones observes that it is the normal practice in excavation reports for stratigraphy, architecture and the various classes of finds to be presented in separate chapters: these are necessarily often the work of different specialists, who may devote much effort to reviewing parallels from other sites. However, detailed spatial and contextual analysis at the site level is less common. The result is that the various facets of the artefactual data from a particular project are not necessarily reviewed within a site-specific framework. Rather, they are dislocated from their contexts, to become artefacts in the abstract, with analysis generally taking the form of comparison with “related” objects recovered from a selection of sites covering relatively extensive intervals of time and space. This practice is a key element in facilitating “normative research” and is linked to the perceived need to produce the kind of generalising, macroscale accounts, in which “archaeological cultures” feature prominently. The outcome, however, is that artefact patterning at a regional-scale may be discussed without a clear understanding of the detailed contextualization of the material at individual sites.

Clearly these practices are historically contingent and reflect the expectations of the intellectual environment within which they were formed. However, the way in which we organize and present our data impacts upon the way in which archaeology can be “written” at a synthetic level, for example by rendering some forms of interpretation relatively straightforward (e.g. inter-site or regional ceramic comparisons), but making other modes of analysis more difficult to develop.

In the case of the southern Levant, we lack knowledge on some very basic topics – for example the social and economic implications of the palpable differentiation of communities by size, function and local subsistence possibilities. Such investigations might be viewed as the prime function of long-term research excavations such as those at Gilat (Levy *et al.* 2006), Teleilat Ghassul (Bourke 2002, 2007), Shiqmim (Levy 1987) or Sha’ar ha-Golan (Garfinkel and Miller 2002) all of which have provided large quantities of high quality evidence. Yet, as Rowan and Lovell (this volume) observe, some of the most important data to emerge in recent years has come from salvage excavations such as Afridar (Braun and Gophan 2004), Modin (van den Brink this volume), Yiftahel (Braun 1997) and Peqi’in (Gal *et al.* 1997). The fact that new research questions are being addressed through salvage archaeology has parallels in contemporary Britain. There, fieldwork in lowland landscapes in response to the activities of developers, has highlighted the scale of prehistoric settlement away from the areas traditionally favoured by long-term research projects (Bradley 2007). In the case of the Levant, the growing impact of the evidence from salvage projects might indicate that the questions which appeal to research funding agencies, or the issues around which researchers have designed their projects, have been able to address some gaps in our knowledge more effectively than others.



## ***Approaches to Material Culture***

Boivin (2004, 66-67), citing examples from anthropology, points out how the properties of material objects can shape the form of social schemes. In a specific example, Roux *et al.* (this volume) note how changes in the form of material culture and production techniques would have impacted upon a wide range of activities including the procurement of raw materials, the organization of labour, the timing and perceived status of different activities and the range of skills and facilities required. To take another instance, the replacement of chipped stone by metal for cutting tools might be expected to have had ramifications not just for the relative values of the different materials. It would have impacted upon the relative status assigned to particular forms of labour, but also the importance of the connections through which different resources were obtained, and thus the strength and orientation of different social networks, and the relative status associated with participation in these. The infrequency with which such issues were addressed by contributors to the volume might be seen as symptomatic of the grip of the “archaeological culture”, which both sets the questions, and provides the vocabulary with which answers can be constructed.

If we seek to move away from “cultures” we will need to modify the way in which we approach artefact data, and if we wish to build regional narratives from the bottom-up, there is a need for detailed inter-site material culture studies. However, these must go beyond simple typological comparisons, and assemble and interpret the variable evidence for matters of manufacture, context, and consumption. We need to understand the spatial and chronological extents of specific artefact styles, but also how this is expressed in terms of raw materials and technology in different contexts. This does not mean, however, that we should produce only the occasional definitive study, accompanied by a massive *corpus*. Rather, we require a continuing, and flexible engagement with the evidence, as it is such information that will allow us begin to investigate the networks of knowledge and communication which underpinned much past behaviour. The need to interpret past societies through the medium of their objects requires us to consider the cultural logic which brought these remains into being, a point expounded many years ago by Shanks and Tilley (1987) among others. Jones (2002, 25) has argued that a potentially useful way to do this is by “tacking back and forth between the material evidence and our theoretically informed notions of how human society is reproduced, --- and to thus develop a web of meaning, building-up connections and networks of significance between objects and concepts and practices”.

This might indeed be a useful way to move forward, as even where striking and spatially extensive similarities are evident in the material record, attempts to consider their significance remain few. Spatially extensive networks for the circulation of items of material culture (and probably other things too) clearly existed (Commence 2006; Roux *et al.* this volume; Rutter and Philip 2008). These have generally been discussed in terms of prestige goods and craft specialists, with reference to concepts drawn from the general anthropological literature (Kerner 2001; Levy, 1986, 1995). However, such explanations sit rather uncomfortably with the apparent absence of such material in many

parts of the region (Bourke 2008, 137). Not only do the spatial extents of the various networks remain poorly defined, we have little understanding of the significance of the *specific* subset of material which circulated within them, even though these may have been of great importance to the communities involved. The lack of attention to these matters may reflect the belief that normative cultures are based upon shared ideas, and that as Johnson (1999, 65) points out, once the existence of particular culture is accepted, its specific form and its continued reproduction in that form need no further explanation.

One of the most debilitating aspects of ceramic studies in the southern Levant has been the tendency to focus analysis upon shape typology and decoration, the primacy of which was established at a time in which ceramics provided the main basis for chronological assignment (e.g. Albright 1932, Wright 1937). However, a wide range of approaches are now available through which material culture assemblages can be assessed and compared (Chilton ed. 1999), and this without recourse to over-generalised concepts such as “specialisation” (Dessel and Joffe 2000, 48).

Ways in which the ceramic data might be used to consider inter-community relationships at moderate spatial scales have been explored by Roux *et al* (this volume) and Burton and Levy (this volume). The latter seek to comprehend change among sites in a particular sub-region, by mapping quantified ceramic data against a radiometric dating framework. The aim is to compare material culture assemblages – mainly ceramics – between sites and to investigate to what extent patterns of similarity and difference can be attributed to chronology, physical distance, and inter-community connectivity. While the greater use of quantified material culture studies is to be encouraged, this does raise the issues of sample size, and also the quality and comparability of contexts. Sherd material from contexts such as domestic middens can provide valuable evidence on ways in which material culture was mobilised and consumed as an aspect of routine household practices (Chesson 2000, 366). However, despite an extensive literature on the subject in American archaeology in particular (e.g. Schiffer 1987), the relationship – in particular in quantified terms - between refuse deposits and “living” household assemblages remains poorly understood in Levantine archaeology.

### **Communities of Practice**

There has been growing understanding within the social sciences in recent years that what Giddens (1984) has termed the “practical consciousness” which informs peoples daily routines is key to comprehending the ways in which people both constructed, and were in turn shaped by, their social and material worlds (Gosselain 1999, 2000; Hodder and Cessford 2004). The techno-petrographic approach employed by Roux *et al.* (this volume) draws upon such practice-based approaches. The former focus upon manufacturing processes, and the sequence of actions known as the “*châînes-opératoires*”, (Lemonnier 1993) which allows them to address the relationship between people and objects through the way they are produced, the selection and acquisition of raw materials, manufacturing techniques and the social relations that underlie their production. Because of the socialised nature of learning, the transmission of technical tasks associated with the acquisition of particular

bodily techniques, is believed to encapsulate important symbolic considerations (Dobres 2000), and thus allow the identification of what Lave and Wenger (1998) term “communities of practice”. These are groups of people who share a common interest and learn how to further this more effectively through regular interaction — although learning may be an incidental outcome that accompanies other social processes.

The value of this approach is that it provides a means to assess the structure of the ceramic assemblage from Abu Hamid, by providing data on the diversity of fabrics, their likely provenance and the relationships between vessel form, petrography and technical procedures. While the case-study examines temporal change at Abu Hamid, the method also offers a way in which assemblages from different sites can be compared across many dimensions: the physical distribution of vessels, the transmission of practical knowledge, the organizational dynamics of production and acquisition and the variable relationships between different components of sites’ ceramic assemblages.

The complexity of ceramic procurement evidenced at Abu Hamid Phase II (Roux *et al* this volume), indicates the risks inherent in assuming as a default option, that the assemblage from a single site is, by and large, of local production. It demonstrates that the ceramic assemblage from a particular site should not be treated as a unified package diagnostic of a “culture” but as componential and highly contingent. Such complex systems of ceramic consumption might well account for the diversity apparent in Late Neolithic / Early Chalcolithic ceramic assemblages in the region, confirming the view that bounded and homogenous ceramic regions, when these exist, require specific explanation (Philip and Baird 2000, 22).

Using this approach it is possible to assess the nature of individual assemblages and their relationships to both earlier practices in that locality, and wider communities of practice. By showing that the ceramics from Abu Hamid Level III belong to a different, technologically more homogenous and spatially more extensive tradition than their predecessors (Roux *et al* this volume), it is possible to argue for the development by the mid-5<sup>th</sup> millennium cal BC, of widespread communities of practice in the sphere of ceramic production. This is almost certainly one of the elements which underlies what has been termed the “Ghassulian culture”. The value of a technological approach is further underscored by Braun’s (this volume) revealing observation that despite certain changes of vessel form, early EB I ceramic production was in many respects, a de-skilled version of Chalcolithic technology.

### **The Object**

Another area of interest is the way that we approach artefacts themselves, a discussion that might usefully draw upon recent work on materiality. One useful development from our standpoint has been the understanding that the assignation of the meaning of an artefact is not fixed, once and for all, but is created to some extent by context. What this implies is that while things are bound-up within human affairs, in turn, people use objects to create and

structure social relations. Thus the archaeological record is composed of objects whose relationships with people, and with other artefacts, are changing constantly according to the contexts within which they are being used and thus understood or interpreted. In this light, meanings are rarely “received” but are constantly remade through practice, what has been “the materialization of culture” (DeMarrais 2004, 11-12), in effect the way in which objects intervene in social relationships. As material culture is embedded in shared practices and understandings, webs of interaction between the social and the material are generated, creating elements of coherence which we can detect through archaeology.

A simple example would be the way in which the shaping of small lumps of clay into crude representations of animals, allowed these to perform a role in rituals associated with hunting (Freikman and Garfinkel 2009), in effect forming a link between the hopes and desires of would-be hunters and the spirits. Of course, other situations will be more complex, with artefacts exchanged between people and thus coming to represent specific relationships or events. As objects may be exchanged a number of times they thus come to carry a complex range of memories and associations – in effect a biography. In this way, two superficially similar items may come to have very different meanings, and thus to intercede quite differently in the field of human actions. It is probably worth exploring how these ideas might be developed in the context of the data from the southern Levant.

When we consider exchange networks, we need to consider not just the familiar broad-scale patterns: we must also examine microscalar evidence for local consumption practices (Bradley and Edmonds 1993). A case in point is the basalt vessels which occur at numerous sites in the southern Levant in the Chalcolithic and the EB I periods (Braun 1990; Rowan *et al.* 1999). It is hard to identify a particular task that could *only* have been undertaken (in a strictly functional sense) using a basalt vessel, rather than one made in wood, pottery or some locally available stone. Therefore, it is clear from the outset that the significance of basalt vessels is almost certainly bound up with a complex understanding of materials in which “value” or “significance” would have been influenced by factors such as availability, place of origin, the human relationships involved in their acquisition or transmission, and local traditions regarding matters of “appropriateness”.

To focus upon the situation in EB I in particular, Schaub (2008, 279-282) has observed that the majority of vessels from Bab edh-Dhra’ belong to a single type, and that in contrast to the wider regional pattern, these were found in mortuary rather than settlement contexts. Moreover, while vessels from sites elsewhere in the southern Levant were generally made using raw materials from sources located in North Jordan or the Jaulan, examples from the southern Ghor appear to have been sourced mainly from local basalt outcrops on the Kerak plateau (Philip and Williams-Thorpe 1993, 2001; Rutter *et al.* 2003). In a study of stone axes in the British Neolithic, Bradley (2000, 86) has argued that in addition to the functional properties of the rock, a range of social factors also contributed to the choice of axe source, and there is evidence to suggest that place of origin may have been an important element

in the past categorisation of material culture (Arnold 1971, 27; Bradley and Edmonds 1993). In this light, it is not unlikely that the source of basalt vessels may have influenced their perceived qualities and associations, thus contributing to their creation of a distinct “identity”.

Thus while basalt vessels are widely distributed across the southern Levant during both the Chalcolithic and EB I periods, the combined evidence of context and geochemistry indicates the existence of quite specific practices at Bab edh-Dhra' during the EB I period, and which were presumably embedded within a localised knowledge system. This is exactly the kind of information that can be obscured by large-scale studies of the kind that presume the existence of both an integrated distribution network, and a universal system of meaning.

An approach of this type might have potentially interesting implications for our understanding of aspects of Chalcolithic period metal artefacts, in particular those produced using complex ternary alloys, and which generally appear in distinctive forms (Levy and Shalev 1989, 355-359; Shalev 1999; Shalev and Northover 1993; Tadmor *et al.* 1995). It is generally believed that these artefacts moved through prestige exchange networks of some sort (Kerner 2001; Levy 1986, 1995), and would therefore have been closely involved in shaping social relations and social reproduction. To accept this, however, is not to suggest that the significance of these objects remained the same at all times. As Shugar and Gohm (this volume) demonstrate, examples have been recovered from various places and contexts, including burials, settlements, and a large hoard at Nahal Mishmar, which included both complete and fragmentary pieces.

Working with data from the Copper Age of south-east Europe John Chapman (2000, 99-104) has suggested a new way of understanding the use and deposition of metal objects, among other categories of artefact. He argues (Chapman 2000, 5) for “the creation, maintenance and development of social relations through the enchainment and accumulation of personalised objects”. As I read it, by enchainment he means that two individuals wishing to establish some form of social relationship, agree on a specific artefact appropriate to that particular relationship and break it into two or more parts, with each participant in the relationship retaining a part as a marker of the relationship. Parts may be further divided in the process of the establishment of different relationships, or passed on to a different person, and are kept separate until such time as the relationship is reconstituted. In this way items of material culture or parts thereof, come to materialize relationships between people.

He also suggests that what are often termed 'hoards', might be connected to the notion of the fragmentation of 'sets' of artefacts (Chapman 2000, 46-47). According to this scheme, sets are seen as integrally related groups of individual elements. These too can be enchainment, but not as fragments of an artefact, but as individual elements drawn from a set. However, hoards, particularly in the case of valuable materials such as metal, may also indicate the development of a different concept, that of status gained through

accumulation (Chapman 2000, 130), and underscores the notion that an object derives meaning from form, material and context. As the notion of enchainment can be applied to fragments, individual objects, and groups or sets of artefacts, this may provide us with a new framework through which we might not only to consider Chalcolithic metalwork, but also revisit various elements of material culture, including those which are loosely grouped under the heading “prestige goods”.

The significance of these artefacts is likely to have varied according to context, with a particular object valued and understood differently when in circulation and when in the possession of a specific individual or group. In addition, the meaning assigned to specific artefacts may have varied in according to shifts in the way in which different parts of the human age-gender life course were constructed and represented (Sofaer Deverinski 2000, 401). Value may have been further distinguished depending upon whether the object was in the possession of a named individual, formed part of a hoard, or was associated with the dead – i.e. within a tomb. In fact, the prominence of “secondary interments” a practice which required regular access to burial places, for among other things the manipulation and structured deposition of human remains (Chesson 2007, 117; Joffe 2003), might suggest that objects associated with the dead could have taken part in social transactions, including their movement back to the world of the living. In short, rather than visualizing a single class of “prestige” metalwork, we might do better to view it as a material resource deployed flexibly according to specific needs and circumstances. Finally, the potential for metal artefacts to be recycled gives them a very different notion of “value”, perhaps even a different construction of materiality from contemporary artefacts made from materials like stone and ivory. In short, the evidential value of artefacts is maximized, not when they are considered as cultural indicators, or “type-fossils” but when they are treated as material resources which could be deployed actively within various fields of practice.

The distinctive “ladder” burials identified at Ashqelon *Barnea* have encouraged Golani and Nagar (this volume) to try to identify the source of an immigrant group. However, using a practice-based approach, one might look beyond formal similarities and differences to consider how changes in burial might indicate the transformation of cultural practices to reflect new social or organizational principles, given the specific material resources available within the landscape of the coastal plain. Superficially at least, these cemeteries appear very different from “typical” late EB I cave burials in the region, those from Azor (Ben Tor 1975) for example. Philip has suggested (2008, 209-210) that one of the key differences between Chalcolithic and EB I societies was the replacement of portable artefacts as sources of power, by agricultural products, the generation of which rested upon access to land, water and labour. As such, the multiple successive burials of the EBA have been interpreted as a materialization of the kinship groups (Chesson 2003, 2007; Philip 2003; 2008) which are believed to have underpinned rights to land and to have constituted the basis of extra-household labour units.

Viewed in this light, the linked chains of adult burials documented at Ashqelon *Barnea* (Golani and Nagar this volume) might be understood as representing a formative stage in the materialization of kinship, expressed in a form that was compatible with the material affordances of the coastal plain. It is interesting to note therefore, that the nineteen interments spread over ten cists included within the ladder is broadly consistent with the maximum number of individuals interred within any single EB I tomb at Bab edh-Dhra' - Tomb A 71 with 19 burials (see Schaub and Rast 1989, 183, Table 4, 233; Table 10 for details). Also of note is the fact that in some cases the built stone burial structures which occur in various parts of the southern Levant (and the parallels to which are noted by Golani and Nagar this volume), are linked by low walls running between individual structures (Mortensen and Thuesen 2004, 109-110; Swauger 1966; 106-107), suggesting that individual burial receptacles were linked to some kind of larger burial landscape.

Equally, there has been little consideration of the way in which societies reproduce themselves, through the operation of social memory, although the issue has been explored in both Neolithic and EBA contexts (Chesson 1999, 2001, 2007; Kuijt 2008). Work on mortuary practices in the British Neolithic and in the Balkans (e.g. Chapman 2000, 144-145; Fowler 2002) raises the possibility that the carefully managed disarticulated remains which are found in many Chalcolithic and EB I burials, might point to the dead human body having played a role in the mediation of social relations. In fact, it is quite possible that the disarticulation and selective curation evident in the EB I burials at Bab edh-Dhra', for example (Chesson 2007, 117-118), echoes anthropological and archaeological evidence for skeletal remains remaining actively involved in the world of the living (Campbell *et al.* 2003, 123-124; Kansa and Campbell 2004).

#### **4. Concluding thoughts**

Rowan and Lovell (this volume) remark that "culture history is the platform upon which current archaeological research [in the southern Levant] is played out". I have sought to indicate above how the continuing central position of "cultures" works to deny space to alternative approaches. As a result, the later prehistory of the southern Levant has remained relatively insular as a research field, and has not always been able to address effectively the kind of research questions that are of interest to wider scholarship. While Bintliff (2008, 162) wisely cautions against the tendency to view "the development of archaeological theory in stadial evolutionary terms, with the replacement of misguided approaches by superior ones on a generational or decadal level", I believe that in this case there is a genuine need for change, and that this cannot simply be dismissed as bending to current academic fashion.

I am aware that not all of the participants at the Madrid meeting will agree with my remarks. Some, I know, share many of my interests and concerns, some will find parts of value, while others will disagree strongly: divergence of views is appropriate in an academic discipline. It is, of course, highly desirable that regional specialists should seek to build the depth of the dataset, by the collection, analysis and publication of new evidence and by detailed comparative analysis. However, I have suggested above that the way in

which this is done has a greater impact upon the wider utility of that evidence than has generally been acknowledged.

Wengrow observes (2006, 194) that in much of the western scholarly tradition the ancient Middle East tends to be presented as a stage in global history — surely a perfect example of the suppression of difference to create a macroscale narrative. As a result, the Middle East has not always been considered as consisting of separate places, each with a distinctive temporal development and encompassing multiple trajectories of social and cultural change. In fact, the later prehistory of the southern Levant provides an excellent instance of a very distinct regional trajectory, one that differs in many respects from those documented for both north and south Mesopotamia (Greenberg 2002, 2-3; Joffe 1993, 58-61; Philip 2008, 161-166). That this is so appears, at least to me, to offer a way to develop research questions that will interest not only those already working in the region, but a significant swathe of the wider research community. In this way, the later prehistory of the southern Levant could make an important contribution to wider debates, thus raise its profile within the discipline, and, one might hope, see an increase in the flow of research funds.

However if we are to capitalize on this opportunity, there must be some reorientation within Levantine prehistory. While disputes over definitions and units of analysis will never go away, in-part because they refer to real issues, we must also make a greater effort to ask the kind of questions which are likely to be of interest to a wider section of the discipline. Data of the quantity and quality of that from the southern Levant is exactly what is needed in order to facilitate the exploration of alternative narrative. However, this will require researchers to address the evidence using concepts that are meaningful to scholars working in other areas, and to frame their discussion around topics of broad and current interest. This will constitute a significant challenge as it will require a degree of change in both research priorities and practices, although the potential rewards could be substantial.

## Notes

1. I am grateful to my colleague Dr Andrew Millard for his helpful advice on the averaging of radiocarbon dates.



- Akkermans, P. M. M. G. and Schwartz, G. M. (2003) *The Archaeology of Syria*. Cambridge, Cambridge University Press.
- Albright, W. F. (1932) *The Excavations at Tell Beit Mirsim, I The First Three Campaigns*. New Haven, American Schools of Oriental Research.
- Algaze, G. (2004) *The Uruk World System: The Dynamics of Early Mesopotamian Civilization*, Chicago, University of Chicago Press.
- Algaze, G. (2008) *Ancient Mesopotamia at the Dawn of Civilization. The Evolution of an Urban Landscape*. Chicago / London, University of Chicago Press.
- Anfinset, N., Taha, H., al-Zawahra, M. and Yasmine, J. (this volume). Societies in transition; contextualising Tell el-Mafjar, Jericho. In J. Lovell and Y. Rowan (eds) *Culture, Chronology and the Chalcolithic: Transitions in the Late Prehistory of the Southern Levant*. Oxford, Oxbow.
- Arnold Dean, E. (1971) Ethnomineralogy of Ticul, Yucatan potters: etics and emics. *American Antiquity* 36, 20-40.
- Banning, E. B. (2007a) Wadi Rabah and related assemblages in the Southern Levant: interpreting the radiocarbon evidence. *Paléorient* 33, 77-102
- Banning, E. B. (2007b) Introduction. Time and tradition: problems of chronology in the 6th-4th millennia in the Levant and Greater Mesopotamia. *Paléorient* 33, 11-14
- Banning, E. B., Gibbs K., and Kadowaki, S. (this volume) Changes in material culture at Late Neolithic Tabaqat al-Būma, in Wadi Ziqlab, northern Jordan. In J. Lovell and Y. Rowan (eds) *Culture, Chronology and the Chalcolithic: Transitions in the Late Prehistory of the Southern Levant*. Oxford, Oxbow.
- Barker, G. W., Gilbertson D. D. and Mattingly, D. J, eds. (2008) *Archaeology and Desertification: The Wadi Faynan Landscape Survey, Southern Jordan*. Levant Supplementary Series. Oxford, Oxbow.
- Barrett, J. (1987) Contextual archaeology. *Antiquity* 61, 468-473.
- Barrett, J. (1994) *Fragments from Antiquity: An Archaeology of Social Life in Britain, 2900-1200 BC*. Oxford, Blackwell.
- Barrett, J. (2000) A thesis on agency. In M.-A. Dobres and J. E. Robb (eds) *Agency in archaeology*, 61-69. London, Routledge.
- Bar-Yosef, O. and A. Gopher, Eds. (1997) *An Early Neolithic Village in the Jordan Valley. Part 1 The Archaeology of Netiv Hagdud*. Bulletin (American School of Prehistoric Research) no. 43. Cambridge, MA, Peabody Museum of Archaeology and Ethnology, Harvard University.

- Bar-Yosef, O. and R. Meadow (1995) *The origins of agriculture in the Near East. Last Hunters, First Farmers New Perspectives on the Prehistoric Transition to Agriculture*. T. D. Price and A. B. Gebauer. Santa Fe, N.M, School of American Research Press.
- Ben-Tor, A. (1975) *Two Burial Caves of the Proto-Urban Period at Azor, 1971: The First Season of Excavations at Tel Yarmuth 1970*. Jerusalem, The Hebrew University.
- Ben-Tor, A., ed. (1992) *The Archaeology of Ancient Israel*. New Haven ; London, Yale University Press.
- Bernbeck, R. and S. Pollock (2004) The political economy of archaeological practice and the production of heritage in the Middle East. In L. Meskell and R. W. Preucel (eds) *A Companion to Social Archaeology*, 335-352. Malden & Oxford, Blackwell.
- Betts, A. V. G., Ed. (1992) *Excavations at Tell Um Hammad, 1982-1984 : the early assemblages (EB I-II)*. Edinburgh, Edinburgh University Press.
- Bintliff, J. L. (2008) History and continental approaches. In A. R. Bentley, H. D. G. Maschner and C. Chippindale (eds) *Handbook of Archaeological Theories*, 147-164. Lanham, Altamira Press.
- Boivin, N. (2004) Mind over matter? Collapsing the mind-matter dichotomy in material culture studies. In E. DeMarrais, C. Gosden and C. Renfrew (eds) *Rethinking Materiality: The Engagement of the Mind with the Material World*, 63-72. Cambridge, McDonald Institute for Archaeological Research.
- Bourke, S. J. (2002) The origins of social complexity in the southern Levant; new evidence from Teleilet Ghassul, Jordan. *Palestine Exploration Quarterly* 134, 2-27.
- Bourke, S. J. (2007) The Late Neolithic/Early Chalcolithic transition at Teleilat Ghassul: context, chronology and culture. *Paléorient* 33, 15-32
- Bourke, S. J. (2008) The Chalcolithic period. In R. Adams (ed.) *The Archaeology of Jordan: a Reader*, 109-160. London, Equinox.
- Bourke, S., U. Zoppi, Meadows, J., Hua, Q. and Gibbins, S. (2004) The end of the Chalcolithic period in the South Jordan Valley: New 14C Determinations from Teleilat Ghassul, Jordan. *Radiocarbon* 46, 315-324.
- Bradley, R. (2007) *The Prehistory of Britain and Ireland*. Cambridge Cambridge University Press.
- Bradley, R. and M. Edmonds (1993) *Interpreting the Axe trade*. Cambridge, Cambridge University Press.

Braemer, F. (2002) La céramique du Bronze ancien en Syrie du Sud. In M. Al-Maqqissi, M. Valérie and C. Nicolle (eds) *Céramique de l'âge du bronze en Syrie. 1, La Syrie du sud et la vallée de l'Orontes*, 9-21. Bibliothèque archéologique et historique (Institut français d'archéologie du Proche-Orient) 161. Beyrouth, Institut français d'archéologie du Proche-Orient.

Braun, E. (1990) Basalt bowls of the EB I Horizon in the Southern Levant. *Paléorient* 16, 87-96.

Braun, E. (1997) *Yiftah'el : Salvage and Rescue Excavations at a Prehistoric Village in Lower Galilee, Israel*. Jerusalem, Israel Antiquities Authority.

Braun, E. (this volume) The transition from Chalcolithic to EB I in the southern Levant, a 'lost horizon' slowly revealed. In J. Lovell and Y. Rowan (eds) *Culture, Chronology and the Chalcolithic: Transitions in the Late Prehistory of the Southern Levant*. Oxford, Oxbow.

Braun, E. and R. Gopha (2004) Excavations at Ashqelon, Afridar - Area G. *Atiqot* 45, 185-241.

Breniquet, C. (2008) *Essai sur le tissage en Mésopotamie : Des premières communautés sédentaires au milieu du IIIe millénaire avant J.-C.* Paris De Boccard.

Bronk Ramsey, C. (2005) OxCal Program v3.10 University of Oxford Radiocarbon Accelerator Unit [http://www.rlaha.ox.ac.uk/oxcal/arch\\_cmb.htm#radiocarbon](http://www.rlaha.ox.ac.uk/oxcal/arch_cmb.htm#radiocarbon). Retrieved 24th May, 2009.

Bronk Ramsey, C., Higham, T. F. G., Owen, D.C., Pike, A.W.G. and Hedges, R.E.M. (2002) Radiocarbon dates from the Oxford AMS system: Archaeometry datelist 31. *Archaeometry* 44/3 (supplement 1), 1-149.

Brooks, C. (2006) Cultural responses to aridity in the Middle Holocene and increased social complexity. *Quaternary International* 151, 29-49.

Buck, C. E., W. G. Cavanagh and Litton, C. D., (1996) *Bayesian Approach to Interpreting Archaeological Data*. Chichester, John Wiley.

Burton, M. and T. E. Levy (2001) The Chalcolithic radiocarbon record and its use in southern Levantine archaeology. *Radiocarbon* 43, 1233-1246.

Burton, M. and T. E. Levy (this volume). The end of the Chalcolithic period (4500-3600 bce) in the northern Negev desert, Israel. In J. Lovell and Y. Rowan (eds) *Culture, Chronology and the Chalcolithic: Transitions in the Late Prehistory of the Southern Levant*. Oxford, Oxbow.

Byrd, B. F. (2005) *Early village life at Beidha, Jordan : Neolithic Spatial Organization and Vernacular Architecture : the Excavations of Mrs. Diana Kirkbride-Helbaek*. Oxford, Oxford University Press.

- Campbell, S. (2007) Rethinking Halaf chronologies. *Paléorient* 33, 103-136.
- Campbell, S., Carter, E., and Gauld, S. (2003) Elusive complexity : new data from late Halaf Domuztepe in south central Turkey. *Paléorient* 29, 117-133.
- Campbell, S and Fletcher, A. (in press) Questioning the Halaf-Ubaid Transition. In R. Carter and G. Philip (eds). *Beyond the Ubaid: Transformation and Integration in the Late Prehistoric Societies of the Middle East*. Chicago: The Oriental Institute
- Chapman, J. (2000) *Fragmentation in Archaeology*. London, Routledge.
- Charvát, P. (2002) *Mesopotamia before history*. London, Routledge.
- Chesson, M.S. (1999) Libraries of the dead. *Journal of Anthropological Archaeology* 18, 137-64.
- Chesson, M.S. (2000) Ceramics and daily life in the EBA household: form, function and action in residential compounds at Tell el-Handaquq, south Jordan. In G. Philip and D. Baird (eds) *Ceramics and Change in the Early Bronze Age of the Southern Levant* , 365-378. Sheffield, Sheffield Academic Press.
- Chesson, M.S. (2001) Embodied memories of place and people: death and society in an early urban community. In M. Chesson (ed.) *Social Memory, Identity and Death: Ethnographic and Archaeological Perspectives on Mortuary Rituals*, 100-113. Arlington, VA, American Anthropological Association 10
- Chesson, M. S. (2003) Households, houses, neighborhoods and corporate villages: modelling the Early Bronze Age as a House Society. *Journal of Mediterranean Archaeology* 16, 79-102.
- Chesson, M.S. (2007) Remembering and forgetting in Early Bronze Age mortuary practices on the southeastern Dead Sea Plain, Jordan. In N. Laneri (ed.) *Performing Death. Social Analyses of Funerary traditions in the Ancient Near East and Mediterranean*, 109-140. University of Chicago Oriental Institute Seminars 3. Chicago, The Oriental Institute.
- Childe, V. G. (1933) Races, peoples and cultures in prehistoric Europe. *History* 18, 193-203.
- Childe, V. G. (1956) *Piecing Together the Past. The Interpretation of Archaeological Data*. London, Routledge & Kegan Paul.
- Chilton, E. S., Ed. (1999) *Material Meanings. Critical approaches to the interpretation of material culture*. Salt Lake City. The University of Utah Press.

Clark, G. (1977) *World prehistory: in new perspective*. Cambridge Cambridge University Press.

Clarke, D. L. (1978) *Analytical Archaeology*. London, Academic Press.

Clarke, J., McCartney, C. and Wasse, A. (2007) *On the Margins of Southwest Asia. Cyprus During the 6th to 4th millennia BC*. Oxford, Oxbow.

Colledge, S., Conolly J. and Shennan, S (2005) The evolution of Neolithic farming from SW Asian origins to NW European limits. *European Journal of Archaeology* 8, 137-156.

Colledge, S. and J. Conolly eds. (2007) *The Origins and Spread of Domestic Plants in Southwest Asia and Europe*. California, UCL Institute of Archaeology/Left Coast Press.

Commence, C. (2006) Chapter 10. Gilat's Ceramics. Cognitive dimensions of pottery production. In T. E. Levy (ed.) *Archaeology, Anthropology and Cult: The Sanctuary at Gilat, Israel*, 394-506. London, Equinox.

Croft, P. (1994) Some preliminary comments on the animal remains from the first three seasons at Shuna: preliminary report on the third (1993) season of excavations at Tell esh-Shuna North. *Levant* 26, 130-131.

de Vaux, R. (1970) Palestine during the Neolithic and Chalcolithic periods. *Cambridge Ancient History* Volume 1.2, 499-538. London, Cambridge University Press.

de Vaux, R. (1971) Palestine in the Early Bronze Age. *Cambridge Ancient History*, Volume 1.2, 208-237. London, Cambridge University Press.

DeMarrais, E. (2004) The materialization of culture. In E. DeMarrais, C. Gosden and C. Renfrew (eds) *Rethinking Materiality: The Engagement of the Mind with the Material World*, 11-22. Cambridge, McDonald Institute for Archaeological Research.

DeMarrais, E., Castillo, L. J. and Earle, T. K. (1996) Ideology, materialization and power strategies. *Current Anthropology* 37, 15-31.

Dessel, J. P. and Joffe, A. H. (2000) Alternative approaches to Early Bronze Age pottery. In G. Philip and D. Baird (eds) *Ceramics and Change in the Early Bronze Age of the Southern Levant*, 31-58. Sheffield, Sheffield Academic Press.

Dobres, M.-A. (1999) Of paradigms and ways of seeing: artifact variability as if people mattered. In E. S. Chilton (ed.) *Material Meanings. Critical approaches to the interpretation of material culture*, 7-23. Salt Lake City, The University of Utah Press.

Dobres, M.-A. (2000) *Technology and Social Agency*. Oxford, Blackwell.

Epstein, C. (1998) *The Chalcolithic Culture of the Golan*. Jerusalem, Israel Antiquities Authority.

Finlayson, B. and Mithen, S. eds. (2007) *The Early Prehistory of Wadi Faynan, Southern Jordan : Archaeological Survey of Wadis Faynan, Ghuwayr and al-Bustan and Evaluation of the Pre-pottery Neolithic A site of WF16*. Levant Supplementary Series 4. Oxford, Oxbow.

Fowler, C. (2002 ) Body parts: personhood and materiality in the earlier Neolithic. In Y. Hamilakis, M. Pluciennik and S. Tarlow (eds) *Thinking Through the Body: Archaeologies of Corporeality*, 47-69. New York, Kluwer / Plenum.

Gal, Z., H. Smithline and Shalem, D (1997) A Chalcolithic burial cave in Peqi'in, Upper Galilee. *Israel Exploration Journal* 47, 145-154.

Freikman, M. and Garfinkel, Y. (2009) The Zoomorphic Figurines from Sha'ar Hagolan: Hunting Magic Practices in the Neolithic Near East. *Levant* 41, 5-17.

Garfinkel, Y. (1993) The Yarmoukian Culture in Israel. *Paléorient* 19,115-134.

Garfinkel, Y. and Miller M. A. eds. (2002) *Sha'ar Hagolan. Vol. 1, Neolithic art in context*. Oxford, Oxbow.

Garfinkel, Y. and Dag, D. (2008) *Neolithic Ashkelon*. Jerusalem, Institute of Archaeology, The Hebrew University of Jerusalem.

Giddens, A. (1984) *The Constitution of Society : Outline of the Theory of Structuration*. Cambridge, Polity Press.

Gilead, I. (2007) The Besorian: A Pre-Ghassulian cultural entity. *Paléorient* 33, 33-50

Gilead , I. (this volume) Chalcolithic culture history: Ghassulian and other entities in the southern Levant. In J. Lovell and Y. Rowan (eds) *Culture, Chronology and the Chalcolithic: Transitions in the Late Prehistory of the Southern Levant*. Oxford, Oxbow.

Golani, A. and Y. Nagar (this volume) Newly discovered burials of the Chalcolithic and the Early Bronze Age I in southern Canaan – evidence of cultural continuity. In J. Lovell and Y. Rowan (eds) *Culture, Chronology and the Chalcolithic: Transitions in the Late Prehistory of the Southern Levant*. Oxford, Oxbow.

Golden, J., Levy, T. E. and Hauptmann, A (2001) Recent discoveries concerning Chalcolithic metallurgy at Shiqmim, Israel. *Journal of Archaeological Science* 28, 951-964.

- Gonen, R. (1992) The Chalcolithic Period. In A. Ben-Tor (ed.) *The Archaeology of Ancient Israel*, 40-80. New Haven, Yale University Press.
- Gopher, A. (1995) Early pottery-bearing groups in Israel - the Pottery Neolithic Period. In T. E. Levy (ed.) *The Archaeology of Society in the Holy Land*, 205-221. Leicester, Leicester University Press.
- Gopher, A. and Gophna, R. (1993) Cultures of the eighth and seventh millennia BP in the Southern Levant: a review for the 1990s. *Journal of World Prehistory* 7, 297-354.
- Goren, Y. (1990) The 'Qatifian Culture' in southern Israel and Transjordan: additional aspects for its definition. *Israel Journal of Prehistory* 23, 100-112.
- Gosselain, O. P. (2000) Materializing identities: an african perspective. *Journal of Archaeological Method and Theory* 7, 187-217.
- Gosselain, O. P. (1999) In pots we trust - the processing of clay and symbols in sub-Saharan Africa. *Journal of Material Culture* 4, 205-230.
- Greenberg, R. (2002) *Early Urbanizations in the Levant : a Regional Narrative*. New York, Leicester University Press.
- Grigson, C. (1995) Plough and pasture in the early economy of the Southern Levant. In T. E. Levy (ed) *The Archaeology of Society in the Holy Land*, 245-268. Leicester, Leicester University Press.
- Grigson, C. (2006) Farming? Feasting? Herding? Large mammals from the Chalcolithic of Gilat. . In T. E. Levy (ed) *Archaeology, Anthropology and Cult: The Sanctuary at Gilat, Israel*, 215–319. London, Equino:.
- Hanbury-Tenison, J. W. (1986) *The Late Chalcolithic - Early Bronze I Transition in Palestine and Transjordan*. British Archaeological Reports International Series 311. Oxford: British Archaeological Reports.
- Helms, S. W. (1987) Jawa, Tell um Hamad and the E.B./late Chalcolithic landscape. *Levant* 19, 49-81.
- Hill, J. B. (2006) *Human Ecology in the Wadi al-Hasa: Land Use and Abandonment Through the Holocene*. Tucson, University of Arizona Press.
- Hodder, I. A. (1991) *Reading the Past. Current Approaches to Interpretation in Archaeology*. Cambridge, Cambridge University Press.
- Hodder, I. A. (2006) *Çatalhöyük: the Leopard's Tale Revealing the mysteries of Turkey's ancient 'town'*. London, Thames & Hudson.
- Hodder, I. (2007) Çatalhöyük in the Context of the Middle Eastern Neolithic. *Annual Review of Anthropology* 36, 105-210.

- Hodder, I. and Cessford, C. (2004) Daily practice and social memory at Çatalhöyük. *American Antiquity* 69, 17-40.
- Hunt, C. O., Gilbertson, D. D. and El-Rishi, H. A. (2007) An 8000-year history of landscape, climate, and copper exploitation in the Middle East: the Wadi Faynan and the Wadi Dana National Reserve in southern Jordan. *Journal of Archaeological Science* 34, 1306-1338.
- Joffe, A. H. (1993) *Settlement and Society in the Early Bronze I and II Southern Levant*. Sheffield, Sheffield Academic Press.
- Joffe, A. H. (2003) Slouching towards Beersheva: Chalcolithic mortuary practices in local and regional context. In B. A. Nakhai (ed.) *The Near East in the Southwest. Essays in Honor of William G Dever*, 45-67. Boston, American Schools of Oriental Research.
- Joffe, A. H., J. P. Dessel, and Hallote, R S (2001) The Gilat Woman: Female Iconography, Chalcolithic Cult, and the End of Southern Levantine Prehistory. *Near Eastern Archaeology* 64, 8-23.
- Johnson, M. (1999) *Archaeological theory: an introduction*. Oxford, Blackwell.
- Jones, A. (2002) *Archaeological theory and scientific practice*. Cambridge, Cambridge University Press.
- Kafafi, Z. (this volume) Ghрубba: ware or culture? In J. Lovell and Y. Rowan (eds) *Culture, Chronology and the Chalcolithic: Transitions in the Late Prehistory of the Southern Levant*. Oxford, Oxbow.
- Kansa, S. W. and S. Campbell (2004) Feasting with the dead? – A ritual bone deposit at Domuztepe, south eastern Turkey (c. 5550BC). In S. Jones O’Day (ed.) *Proceedings of the 9th ICAZ Conference Durham 2002, Vol. 1 Behaviour Behind Bones*, 2-13. Durham.
- Kaplan, J. (1958a) Excavations at Wadi Rabah. *Israel Exploration Journal* 8, 149-160.
- Kaplan, J. (1958b) Excavations at Teluliot Batashi, Nahal Soreq. *Eretz Israel* 5, 9-24.
- Kenyon, K.M. (1960) *Archaeology in the Holy Land* 1<sup>st</sup> ed. London: Benn
- Kenyon, K. M. (1979) *Archaeology in the Holy Land*. London, Benn.
- Kenyon, K. M. and Holland, T.A. (1981) *Excavations at Jericho. Vol. 3, The Architecture and Stratigraphy of the Tell*. London, British School of Archaeology in Jerusalem.



Kenyon, K. M. and Holland, T.A. (1982) *Excavations at Jericho. Vol. 4, The Pottery Type Series and Other Finds*. London, British School of Archaeology in Jerusalem.

Kenyon, K. M. and Holland, T.A. (1983) *Excavations at Jericho. Vol. 5, The Pottery Phases of the Tell and Other Finds*. London, British School of Archaeology in Jerusalem.

Kerner, S. (2001) *Das Chalkolithikum in der südlichen Levante die Entwicklung handwerklicher Spezialisierung und ihre Beziehung zu gesellschaftlicher*. Rahden, Leidorf.

Kozłowski, S. K. and O. Aurenche (2005) *Territories, Boundaries and Cultures in the Neolithic Near East*. BAR International Series 1362. Oxford, Archaeopress.

Kuijt, I. ed. (2000) *Life in Neolithic Farming Communities: Social Organization, Identity, and differentiation*. Fundamental issues in archaeology. New York, Kluwer Academic/Plenum Publishers.

Kuijt, I. (2008) The regeneration of life: Neolithic structures of symbolic remembering and forgetting. *Current Anthropology* 49, 171-198.

Kuijt, I., Finlayson, B. and MacKay, J. (2007) Pottery Neolithic landscape modification at Dhra'. *Antiquity* 81, 106-118.

Larson, G., U. Albarella, Dobney, K., Rowley-Conwy, P., Schibler, J., Tresset, A., Vigne, J. D., Edwards, C. J., Schlumbaum, A., Dinu, A., Balacsescu, A., Dolman, G., Tagliacozzo, A., Manaseryan, N., Miracle, P., Van Wijngaarden-Bakker, L., Masseti, M., Bradley, D. G., Cooper, A. (2007) Ancient DNA, pig domestication, and the spread of the Neolithic into Europe. *Proceedings of the National Academy of Sciences of the United States of America* 104, 15276-15281.

Lave, J. and Wenger, E. (1998) *Communities of Practice: Learning, Meaning, and Identity*. Cambridge, Cambridge University Press.

Lemonnier, P. (1993) Introduction. *Technological Choices. Transformation in material cultures since the Neolithic*. P. Lemonnier. London, Routledge.

Levy, T. E. (1986) Archaeological sources for the history of Palestine - The Chalcolithic Period. *Biblical Archaeologist* 49, 82-108.

Levy, T. E. (1987) *Shiqmim I - Studies Concerning Chalcolithic Societies in the Northern -Negev Desert, Israel (1982-1984)*. BAR International Series 356. Oxford, British Archaeological Reports.

Levy, T. E., ed. (1995) *The Archaeology of Society in the Holy Land*. London, Leicester University Press.

Levy, T. E. and Shalev, S. (1989) Prehistoric Metalworking in the Southern Levant: Archaeometallurgical and Social Perspectives. *World Archaeology* 20, 352-372.

Levy, T. E., D. Alon, Rowan, Y M. and Kersel, M. (2006) The sanctuary sequence excavations at Gilat 1975-77, 1989 1990-92. In T. E. Levy (ed.) *Archaeology, Anthropology and Cult. The Sanctuary at Gilat, Israel*, 95-212. London, Equinox.

Levy, T. E., Conner W., Rowan, Y. and Alon, D. (2006) The intensification of production at Gilat: Textile production. In T. E. Levy (Ed.), *Archaeology, Anthropology and Cult. The Sanctuary at Gilat, Israel*, 705–738. London, Equinox.

Lovell, J. (2008) Horticulture, status and long range trade in Chalcolithic southern Levant: early connections with Egypt. In B. Midant-Reynes and Y. Tristant (eds) *Egypt at its origins. 2, Proceedings of the international conference Origin of the State, Predynastic and Early Dynastic Egypt, Toulouse (France), 5th-8th September 2005*, 741-762. Leuven, Peeters:.

Lovell, J. (2001) *The Late Neolithic and Chalcolithic Periods in the Southern Levant. New data from the site Teleilat Ghassul, Jordan*. BAR International Series 974. Oxford, Archaeopress.

Lovell, J. L., Dollfus, G. and Kafafi, Z. (2007) The Ceramics of the Late Neolithic and Chalcolithic: Abu Hamid and the Burnished Tradition. *Paléorient* 33, 51-76

Matthews, R. (2000) *The Early Prehistory of Mesopotamia, 500,000 to 4,500 BC*. Turnhout, Brepols.

Matthews, R. (2003) *The Archaeology of Mesopotamia: Theories and Approaches*. London / New York, Routledge.

Matthews, R. J. (2005) The rise of civilization in Southwest Asia. In C. Scarre (ed.) *The Human Past. World Prehistory and the Development of Human Societies*, 432-471. London, Thames & Hudson.

Mazar, A. (1990) *Archaeology of the Land of the Bible 10,000-586 B.C.E.* New York, Doubleday.

Mazzoni, S. (2002) The Ancient Bronze Age pottery production in north-west Syria. In M. Al-Maqdissi, M. Valérie and C. Nicolle (eds) *Céramique de l'âge du bronze en Syrie. 1, La Syrie du sud et la vallée de l'Orontes*, 69-79. Bibliothèque archéologique et historique 161. Beyrouth, Institut français d'archéologie du Proche-Orient.

Mellaart, J. (1975) *The Neolithic of the Near East*. London, Thames and Hudson.

Milevski, I., P. Fabian, and Marder, O. (this volume) Canaanite blades in Chalcolithic contexts of the southern Levant? In J. Lovell and Y. Rowan (eds) *Culture, Chronology and the Chalcolithic: Transitions in the Late Prehistory of the Southern Levant*. Oxford, Oxbow.

Millard, A. R. and Wilkinson, T. (1999) Comment on AMS radiocarbon dates from the Predynastic Egyptian Cemetery, N7000, at Naga-ed-Dêr by S.H. Savage. 26, 339-341.

Mithen, S. (2003) *After the Ice Age: A Global Human History 20,000-5000 BC*. London, Weidenfeld & Nicolson.

Mortensen, P. and Thuesen, I. (2004) Investigating Conder's Circle at 'Ayn Jadida near Mount Nebo. *Studies in the History and Archaeology of Jordan* 9, 451-456. Amman, Department of Antiquities of Jordan.

Neuville, R. (1930) Notes de préhistoire palestinienne. *Journal of the Palestine Oriental Society* 10, 114-121.

Nieuwenhuys, O. (2007) *Plain and Painted Pottery. The Rise of Late Neolithic Ceramic Styles on the Syrian and Northern Mesopotamian Plains*. Turnhout, Brepols.

Peltenburg, E., Ed. (2003) *Lemba Archaeological Project. Vol 3, i. The Colonisation and Settlement of Cyprus : Investigations at Kissonerga-Myliouthkia, 1976-1996*. Sävedalen, Åström.

Perrot, J. (1968) La préhistoire palestinienne. *Supplément au Dictionnaire Archéologique de la Bible* 8, 285-446.

Philip, G. (2003) The Early Bronze Age of the Southern Levant: A Landscape Approach. *Journal of Mediterranean Archaeology* 16, 103-131.

Philip, G. (2008) The Early Bronze I-III Age. In R. Adams (ed.) *The Archaeology of Jordan: a Reader*, 161-226. London, Equinox.

Philip, G. and Williams-Thorpe, O. (1993) A provenance study of Jordanian basalt vessels of the Chalcolithic and Early Bronze Age I periods. *Paléorient* 19, 51-63.

Philip, G. and Baird, D. (2000) Early Bronze Age Ceramics in the Southern Levant: An Overview. In G. Philip and D. Baird (eds) *Ceramics and Change in the Early Bronze Age of the Southern Levant*, 3-30. Sheffield Academic Press.

Philip, G. and Millard, A. R. (2000) Khirbet Kerak Ware in the Levant: The Implications of Radiocarbon Chronology and Spatial Distribution. In C. Marro (ed.) *Chronologies des pays du Caucase et de l'Euphrate aux IV<sup>ème</sup>-III<sup>ème</sup> millénaires*, 279-296. Paris, Boccard.

Philip, G. and Williams-Thorpe, O. (2001) The production and consumption of basalt artefacts in the Southern Levant during the 5th-4th Millennia BC: a geochemical and petrographic investigation. In A. R. Millard (ed.) *Proceedings of Archaeological Sciences 1997*, 11-30. BAR International Series 939. Oxford, Archaeopress.

Pluciennik, M. (1999) Archaeological narratives and other ways of telling. *Current Anthropology* 40, 653-678.

Pollock, S. (1999) *Ancient Mesopotamia : the Eden That Never Was*. Cambridge, Cambridge University Press.

Robb, J. E. (2004) The extended artifact and the monumental economy. A methodology for material agency. In E. DeMarrais, C. Gosden and C. Renfrew (eds) *Rethinking Materiality: The Engagement of the Mind with the Material World* 131-139. Cambridge, McDonald Institute for Archaeological Research.

Robinson, S. A., Black S., Sellwood, B W and Valdes, P. J. (2006) A review of palaeoclimates and palaeoenvironments in the Levant and Eastern Mediterranean from 25,000 to 5,000 years BP: setting the environmental background for the evolution of human civilisation. *Quaternary Science Review* 25, 1517-1541.

Rollefson, G. O. (2001) The Neolithic Period. In B. MacDonald, R. Adams and P. Beinkowski (eds) *The Archaeology of Jordan*, 67-105. Sheffield, Sheffield Academic Press.

Rosen, A. M. (2006) *Civilizing climate: the social impact of climate change in the ancient near east*. Lanham, MD, Altamira Press.

Rosen, S. A. (this volume) Desert chronologies and periodization systems. In J. Lovell and Y. Rowan (eds) *Culture, Chronology and the Chalcolithic: Transitions in the Late Prehistory of the Southern Levant*. Oxford, Oxbow.

Rothman, M. S. ed. (2001) *Uruk Mesopotamia and its neighbours : cross-cultural interactions & their consequences in the era of state formation*. SAR advanced seminar series. Santa Fe, School of American Research Press.

Rothman, M. S. (2004) Studying the Development of Complex Society: Mesopotamia in the Late Fifth and Fourth Millennia BC. *Journal of Archaeological Research* 12, 75-119.

Roux, V., Courty, M.-A., Dollfus, G, and Lovell, J. (this volume) A techno-petrographic approach for defining cultural phases and communities: explaining the variability of Abu Hamid (Jordan Valley) early 5th millennium cal. BC ceramic assemblage. In J. Lovell and Y. Rowan (eds) *Culture, Chronology and the Chalcolithic: Transitions in the Late Prehistory of the Southern Levant*. Oxford, Oxbow.

Rowan, Y. M., van den Brink, E. C. M., and Braun, E. (1999) Pedestalled Basalt Bowls of the Chalcolithic: New Variations (Mortuary Evidence from Late Prehistoric Cultures of the Southern Levant). *Israel Exploration Journal* 49, 161-183.

Rowan, Y. and Lovell, J. (this volume) Culture, Chronology and the Chalcolithic: theory and transition. In J. Lovell and Y. Rowan (eds) *Culture, Chronology and the Chalcolithic: Transitions in the Late Prehistory of the Southern Levant*. Oxford, Oxbow.

Rutter, G. P., Pearson, D. G., Philip, G., Day, J. M. D. and Ottley, C. J. (2003) The Use of ICP-MS in Provenancing Igneous Stone Artefacts: Examples from the Southern Levant. In G. Holland and S. Tanner (eds) *Plasma source mass spectroscopy*, 209-218. London, Royal Society of Chemistry.

Rutter, G. P. and Philip, G. (2008) Beyond provenance analysis: the movement of basaltic artifacts through a social landscape. In Y. M. Rowan and J. E. Ebeling (eds) *New Approaches to Old Stones: Recent Studies of Ground Stone Artifacts*, 343-358. London, Equinox.

Scarre, C., ed. (2005) *The Human Past. World Prehistory and the Development of Human Societies*. London, Thames & Hudson.

Schaub, R. T. (2008) Basalt bowls in Early Bronze IA shaft tombs at Bab edh-Dhra': placement, production and symbol. In Y. M. Rowan and J. E. Ebeling (eds) *New Approaches to Old Stones: Recent Studies of Ground Stone Artifacts*, 277-284. London, Equinox.

Schaub, R. T. and W. E. Rast (1989) *Bab edh-Dhra. Excavations in the Cemetery Directed by Paul W. Lapp (1965-67)*. Winona Lake, Eisenbrauns.

Scheftelowitz, N. and Oren, R. eds. (2004) *Giv'at ha-Oranim : a Chalcolithic site*. Emery and Claire Yass Publications in Archaeology, Salvage Excavation Reports. Tel Aviv, Tel Aviv University.

Schiffer, M. B. (1987) *Formation Processes of the Archaeological Record*. Albuquerque, University of New Mexico Press.

Segal, D. and Carmi, I. (2004) Determination of age using the <sup>14</sup>C method on archaeological samples from Ashqelon, Afridar - Area E. *Atiqot* 45, 119-120.

Shalev, S. (1999) Recasting the Nahal Mishmar Hoard: experimental archaeology and metallurgy. In A. Hauptmann, E. Pernicka, T. Rehren and U. Yalçin (eds) *Proceedings of the International Conference „The Beginnings of Metallurgy. Der Anschnitt* 9, 295-300. Bochum, Deutschen Bergbau-Museum.

Shalev, S. and Northover, P. J. (1993) The metallurgy of the Nahal Mishmar Hoard reconsidered. *Archaeometry* 35, 35-47.

- Shanks, M. and Tilley, C. (1987) *Reconstructing Archaeology: Theory and Practice*. Cambridge, Cambridge University Press.
- Shennan, S. J. (1994) Introduction: archaeological approaches to cultural identity. In S. J. Shennan ed. *Archaeological Approaches to Cultural Identity*, 1-32. London and New York, Routledge.
- Shugar, A. N. (2001) *Archaeometallurgical investigation of the Chalcolithic site of Abu Matar, Israel: A reassessment of technology and its implications for the Ghassulian Culture*. London, University College. Ph.D.
- Shugar, A. N. and Gohm, C. J. (this volume) Developmental trends in Chalcolithic Copper metallurgy: a radiometric perspective. In J. Lovell and Y. Rowan (eds) *Culture, Chronology and the Chalcolithic: Transitions in the Late Prehistory of the Southern Levant*. Oxford, Oxbow.
- Simmons, A. H. (2007) *The Neolithic Revolution in the Near East. Transforming the Human Landscape*. Tuscon, University of Arizona Press.
- Sofaer Derevenski, J. (2000) Rings of life: the role of early metalwork in mediating the gendered life course. *World Archaeology* 31, 389- 409.
- Stager, L. E. (1992) The periodization of Palestine from Neolithic through Early Bronze times. In R. W. Ehrich (ed.) *Chronologies in Old World Archaeology*, 22-41. Chicago, University of Chicago Press.
- Stekelis, M. (1950-51) A new Neolithic industry: the Yarmukian of Palestine. *Israel Exploration Journal* 1, 1-19.
- Stekelis, M. (1972) *The Yarmukian Culture of the Neolithic period*. Jerusalem, Magnes Press.
- Swauger, J. L. (1966) Dolmen studies in Palestine. *Biblical Archaeologist* 29, 106-114
- Tadmor, M., Kedem, D., Begemann, F., Hauptmann, A., Pernicka, E., Schmitt-Strecker, S.  
(1995) The Nahal Mishmar Hoard from the Judean Desert: technology, composition, and provenance. *Atiqot* 27, 95-148.
- Trigger, B. G. (1968) Major concepts of archaeology in historical perspective. *Man New Series* 3/4, 527-541.
- Trigger, B. G. (1978) *Time and Traditions: Essays in Archaeological Interpretation*. Edinburgh, Edinburgh University Press.
- Ucko, P. (1995) Introduction: archaeological interpretation in a world context. In P. Ucko (ed.) *Theory in Archaeology. A World Perspective*, 1-27. London, Routledge.

van den Brink, E. C. M. and Gophna, R. (2005) *Shoham (North) Late Chalcolithic Burial Caves in the Lod Valley, Israel*. Jerusalem, Israel Antiquities Authority.

van den Brink, E. C. M. (this volume) Continuity and change—cultural transmission in the Late Chalcolithic to Early Bronze Age I: a view from Early Modi'in, a late prehistoric site in Central Israel. In J. Lovell and Y. Rowan (eds) *Culture, Chronology and the Chalcolithic: Transitions in the Late Prehistory of the Southern Levant*. Oxford, Oxbow.

Wapnish, P. and Hesse, B. (2000) Mammal remains from the Early Bronze sacred compound. In I. Finkelstein, D. Ussishkin and B. Halpern (eds) *Megiddo III : the 1992-1996 seasons*, 429-462. Tel Aviv, Institute of Archaeology Tel Aviv University.

Watkins, T. (2004) Architecture and theatres of memory in the Neolithic of southwest Asia. In E. DeMarrais, C. Gosden and C. Renfrew (eds) *Rethinking Materiality: The Engagement of the Mind with the Material World*, 97-106. Cambridge, McDonald Institute for Archaeological Research.

Watkins, T. (2005) From foragers to complex societies in southwest Asia. In C. Scarre (ed.) *The Human Past. World Prehistory and the Development of Human Societies*, 200-233. London, Thames & Hudson.

Wengrow, D. (2006) The idea of prehistory in the Middle East. In R. Layton, S. Shennan and P. Stone (eds.), *A future for Archaeology*, 187-197. London, UCL Press.

Wright, G. E. (1937) *The Pottery of Palestine from the Earliest Times to the End of the Early Bronze Age*. New Haven, American Schools of Oriental Research.

Yannai, E. (2006) *'En Esur ('Ein Asawir) 1: Excavations at a Protohistoric Site in the Coastal Plain of Israel*. Jerusalem, Israel Antiquities Authority.

â€¢ The later prehistory of the southern Levant: issues of practice and context --- Durham University Repository Version more. by Graham Philip. The workshop published here was intended to improve our understanding of the developments during the 6th through the mid-4th millennia BC.Â  extended over 2,000 km from the shores of the Mediterranean to the Straits of Hormuz, including parts of Anatolia and perhaps even the Caucasus. The volume contains twenty- Publisher: dro.dur.ac.uk. 14 The Later Prehistory of the Southern Levant: Issues of Practice and Context 192. Graham Philip. Index 210.Â  Hence, there is no chronological gap between the exploitation of different metallic ore sources in the southern Levant that could support the notion of a temporary shortage in the supply of certain raw materials. On Chalcolithic maceheads and spinning implements. Article.