oi.uchicago.edu

BEYOND THE UBAID

oi.uchicago.edu

BEYOND THE UBAID

TRANSFORMATION AND INTEGRATION IN THE LATE PREHISTORIC SOCIETIES OF THE MIDDLE EAST

edited by

ROBERT A. CARTER *and* GRAHAM PHILIP

papers from

THE UBAID EXPANSION?
CULTURAL MEANING, IDENTITY AND THE LEAD-UP TO URBANISM

International Workshop held at Grey College, University of Durham,
20–22 April 2006

STUDIES IN ANCIENT ORIENTAL CIVILIZATION • NUMBER 63
THE ORIENTAL INSTITUTE OF THE UNIVERSITY OF CHICAGO
CHICAGO • ILLINOIS

oi.uchicago.edu

Library of Congress Control Number: 2010926811
ISBN-10: 1-885923-66-X
ISBN-13: 978-1-885923-66-0
ISSN: 0081-7554

The Oriental Institute, Chicago

©2010 by The University of Chicago. All rights reserved.
Published 2010. Printed in the United States of America.

STUDIES IN ANCIENT ORIENTAL CIVILIZATION • NUMBER 63
THE ORIENTAL INSTITUTE OF THE UNIVERSITY OF CHICAGO
Chicago • Illinois

Series Editors
Leslie Schramer
and
Thomas G. Urban
with the assistance of
Rebecca Cain

Series Editors' Acknowledgments

Felicia Whitcomb and Natalie Whiting assisted in the production of this volume.

Cover Illustration

Selection of pottery vessels from burial 115. Darre-ye Bolaghi, Site 131 (figure 17.9)

Printed by Edwards Brothers, Ann Arbor, Michigan

The paper used in this publication meets the minimum requirements of American National Standard for Information Services — Permanence of Paper for Printed Library Materials, ANSI Z39.48-1984.

oi.uchicago.edu

TABLE OF CONTENTS

ACKNOWLEDGMENTS vii

PART 1: THEORETICAL FRAMEWORKS

1. DECONSTRUCTING THE UBAID. *Robert A. Carter and Graham Philip* 1
2. LOCAL IDENTITIES AND INTERACTION SPHERES: MODELING REGIONAL VARIATION IN THE UBAID HORIZON. *Gil J. Stein* 23
3. MORE THOUGHTS ON THE UBAID PERIOD. *Joan Oates* 45
4. THE HALAF-UBAID TRANSITION: A TRANSFORMATION WITHOUT A CENTER? *Philip Karsgaard* 51
5. QUESTIONING THE HALAF-UBAID TRANSITION. *Stuart Campbell and Alexandra Fletcher* 69
6. THE DEAD HAND OF DEIMEL. *McGuire Gibson* 85

PART 2: IDENTITY AND MATERIAL CULTURE

7. PRACTICES OF DAILY LIFE IN FIFTH-MILLENNIUM B.C. IRAN AND MESOPOTAMIA. *Susan Pollock* 93
8. FIGURING OUT IDENTITY: THE BODY AND IDENTITY IN THE UBAID. *Karina Croucher* 113
9. UBAID HEADSHAPING: NEGOTIATIONS OF IDENTITY THROUGH PHYSICAL APPEARANCE? *Kirsi O. Lorentz* 125
10. *A SNAKE IN THE GRASS:* REASSESSING THE EVER-INTRIGUING OPHIDIAN FIGURINES. *Aurelie Daems* 149
11. THE TERM "HAJJI MUHAMMAD": A RE-EVALUATION. *Harriet Crawford* 163
12. THE DEVELOPMENT OF WOOL EXPLOITATION IN UBAID-PERIOD SETTLEMENTS OF NORTH MESOPOTAMIA. *Hiroshi Sudo* 169
13. UBAID LITHICS REVISITED: THEIR SIGNIFICANCE FOR THE INTERPRETATION OF UBAID SOCIETY. *Elizabeth Healey* 181
14. BUTTRESS-RECESS ARCHITECTURE AND STATUS SYMBOLISM IN THE UBAID PERIOD. *Uwe Sievertsen* 201

PART 3: COMPARATIVE ANALYSES AND REGIONAL PERSPECTIVES

15. A MONUMENTAL FAILURE: THE COLLAPSE OF SUSA. *Frank Hole* 227
16. *UBAID-RELATED-RELATED?* THE "BLACK-ON-BUFF" CERAMIC TRADITIONS OF HIGHLAND SOUTHWEST IRAN. *Lloyd Weeks, Cameron A. Petrie, and Daniel T. Potts* 245
17. BAKUN-PERIOD SITES IN DARRE-YE BOLĀGHI, FARS. *Barbara Helwing and Mojgan Seyedin* 277

oi.uchicago.edu

18. THE EMERGENCE OF UBAID STYLES AT TELL KURDU: A LOCAL PERSPECTIVE. *Rana Özbal* 293

19. AN ASPECT OF THE UBAID INTRUSION IN THE SYRIAN UPPER EUPHRATES VALLEY. *Yayoi Yamazaki* 311

20. THE UBAID IN THE BALIKH VALLEY, NORTHERN SYRIA: BALIKH PERIODS IV–V. *Maria Giuseppina Trentin* 329

21. NETWORKS OF INTERREGIONAL INTERACTION DURING MESOPOTAMIA'S UBAID PERIOD. *Bradley J. Parker* 339

22. EXPLORING SOCIAL ORGANIZATIONAL ASPECTS OF THE UBAID COMMUNITIES: A CASE STUDY OF DEĞIRMENTEPE IN EASTERN TURKEY. *Bekir Gurdil* 361

23. GODEDZOR, A LATE UBAID-RELATED SETTLEMENT IN THE SOUTHERN CAUCASUS. *Christine Chataigner, Pavel Avetisyan, Giulio Palumbi, and Hans-Peter Uerpmann* 377

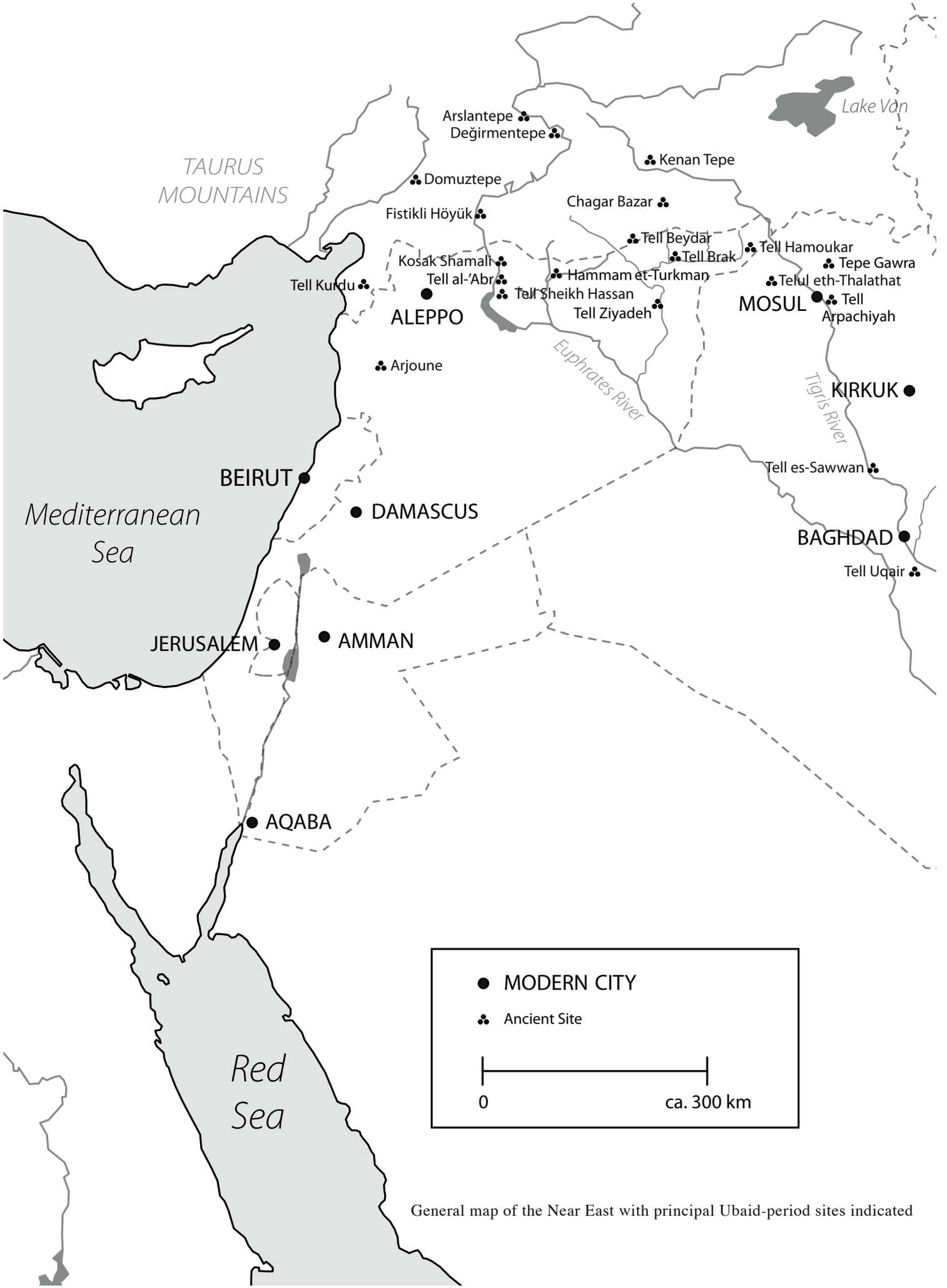
oi.uchicago.edu

ACKNOWLEDGMENTS

Firstly, we would like to acknowledge all our sponsors, without whose support the conference would not have taken place. These include the British Academy, the British School of Archaeology in Iraq (now the British Institute for the Study of Iraq), the Council for British Research in the Levant, and the Archaeology Department of Durham University. Special thanks are due to our key speaker, Gil Stein, who willingly undertook the daunting task of offering a broad overview of the Ubaid phenomenon; and to Derek Kennet, Liam Cooney, and Matt Whincop for helping with the logistics of the conference. Appreciation is also due to all our anonymous referees, whose insightful comments made such a difference to the quality of this publication. We thank them for their time and dedication.

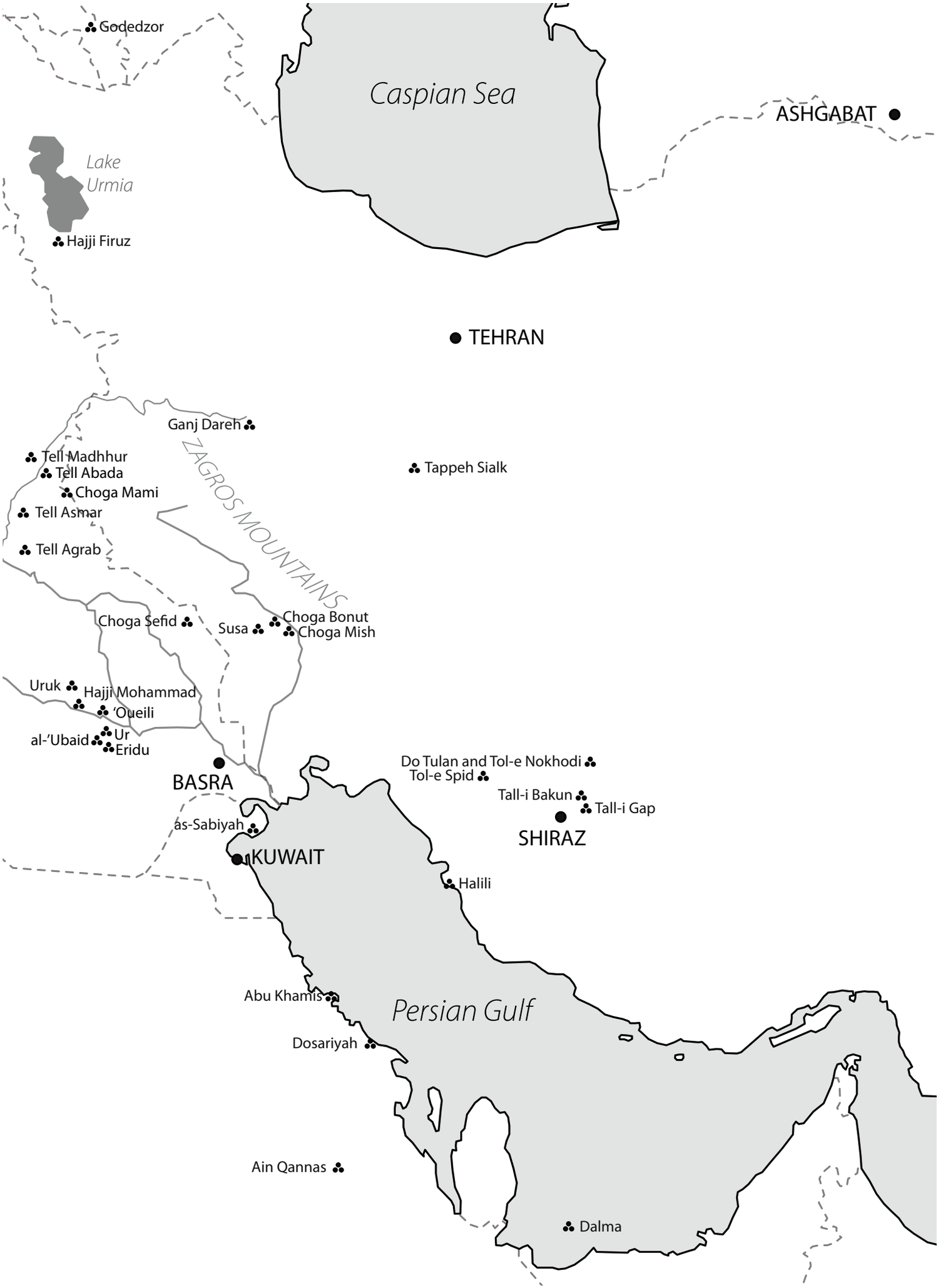
ROBERT A. CARTER, *Oxford Brookes University*,
and GRAHAM PHILIP, *Durham University*

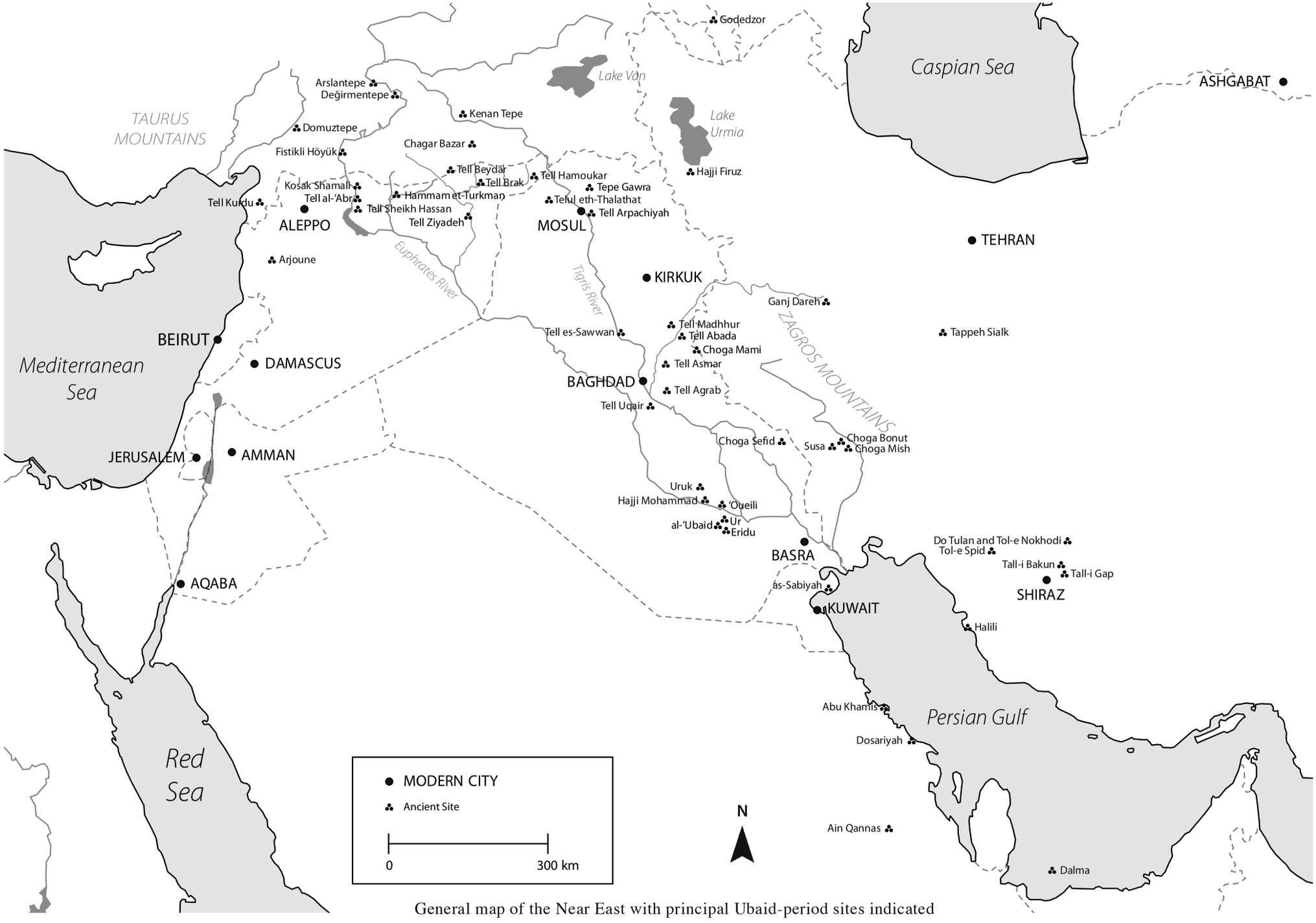
oi.uchicago.edu



General map of the Near East with principal Ubaid-period sites indicated

oi.uchicago.edu





General map of the Near East with principal Ubaid-period sites indicated

oi.uchicago.edu

oi.uchicago.edu

1

DECONSTRUCTING THE UBAID

ROBERT A. CARTER, *Oxford Brookes University*
GRAHAM PHILIP, *Durham University*

OPENING REMARKS

Originally coined to signify a style of pottery in southern Iraq, and by extension an associated people and a chronological period, the term "Ubaid" is now often used loosely to denote a vast Near Eastern interaction zone, characterized by similarities in material culture, particularly ceramic styles, which existed during the sixth and fifth millennia B.C. This zone 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 extraordinary significance of this phenomenon was fully recognized by 1988, when an "Ubaid Symposium" was held at Elsinore, Denmark, with the express purpose of recognizing "the critical importance of the Ubaid era in the cultural evolution of the era" (Henrickson and Thuesen 1989b). The published proceedings, entitled *Upon this Foundation*, are aptly named, as they laid the basis of Ubaid studies for the subsequent two decades. The chief outcome of the conference was the recognition that the Ubaid was not a monolithic entity but was regionally expressed (Henrickson and Thuesen 1989a: 457), a theme developed further in this volume. Henrickson and Thuesen were successful in their stated aim of highlighting the importance of the period, evident in the numerous subsequent references which comment upon the seminal importance of the Ubaid in the development of Mesopotamian societies (Algaze 1989: 591, 1993: 120; Frangipane 2001: 318–23; Matthews 2003: 123; Oates 1993: 408; Yener 2000: 30–33). As a rule, however, most such references were made as a preface to discussions of the subsequent Uruk period, with the Ubaid period generally seen as a preliminary stage and thus as the "foundation" referred to by Henrickson and Thuesen.

The editors of this volume felt it was time to refocus on the Ubaid in its own right. Since 1988 new data have continued to emerge, particularly in those regions often considered peripheral to southern Mesopotamia, which is still perceived as the Ubaid core area by many scholars. The intention of the conference, entitled The Ubaid Expansion?, held at Durham, 20–22 April 2006, was to focus on the Ubaid from a theoretical perspective, including an exploration of the meanings and suitability of the term "Ubaid" itself, and the way in which we as archaeologists approach and understand prehistoric supra-regional archaeological phenomena. Recent theoretical work on identity (Insoll 2006), agency and practice theory (Dobres and Robb 2000), and cultural transmission (Shennan 2002; Mace, Holden, and Shennan 2005) makes this kind of examination particularly timely. We hope that our work has relevance beyond the Near East, and informs work in other regions. We have sought to unpick the meaning of the Ubaid and we have accordingly questioned both our terminology and our conceptualization of a prehistoric past that is but fragmentarily represented by the material recovered from archaeological contexts.

The contributions within this volume range geographically across southern Mesopotamia, northern Mesopotamia, Syria, Anatolia, the Caucasus, and Iran. Themes include aspects of material culture, identity, and chronology, while theoretical arguments address problems of cultural transformation, terminology, and the very ontology of the Ubaid.

oi.uchicago.edu

DEFINITIONS

EXISTING USAGES

The term "Ubaid" has been used in several ways:

(1) *A Pottery Style*. This was the original definition, derived from excavations at the southern Mesopotamian site Tell al-Ubaid (Hall and Woolley 1927). There are problems with defining the boundaries of pottery styles, both spatially and chronologically, but most researchers nonetheless accept the existence of a regionally diversified style of black-painted buff pottery[1] found throughout Mesopotamia and in southeastern Turkey, northern Syria, western Iran, and along the Persian Gulf littoral, and commonly described by archaeologists as Ubaid or Ubaid-related.

(2) *A Period*. While Tell al-Ubaid was first explored in 1919 (Hall and Woolley 1927: 5), the term "Ubaid period" did not come into use until the 1930s (Potts 1986: 20), when the distinctive black-painted buff pottery by which the Ubaid was recognized was assumed to be associated with a discrete ethnic element occupying southern Iraq. At this point, the term referred specifically to the period represented at al-Ubaid, which is today termed Ubaid 3. In 1960 Joan Oates used the long stratigraphic sequence from Eridu to formulate an extended Ubaid chronology comprising four phases; these subsumed earlier and later ceramically defined periods (Oates 1960; this volume). In later publications these appear as follows:

- Ubaid 1 (Eridu style and period)
- Ubaid 2 (Hajji Muhammad style and period)
- Ubaid 3 (Tell al-Ubaid style and period)
- Ubaid 4 (previously known as Late Ubaid)

This scheme has proved extremely durable, notwithstanding some suggested adjustments (Oates 1987a; Crawford this volume), including the addition of an Ubaid 0 (Oueili period) (Lebeau 1987), and a Terminal Ubaid phase sometimes referred to as Ubaid 5 (Oates 1976: 26–28; Forest 1996: 387).

Despite the widespread acceptance of these numerical divisions, in the case of absolute chronology the term "Ubaid period" is not consistently defined. Radiometric data suggest that the whole southern Mesopotamian Ubaid period, including Ubaid 0 and 5, is of immense duration, spanning nearly three millennia from about 6500 to 3800 B.C. (Forest 1996; Valladas, Evin, and Arnold 1996). The cultural trajectory of other regions is different, however, resulting in a much shorter Ubaid period. Using the traditional model, northern communities adopted southern Ubaid styles only in the Ubaid 3 and 4 periods, albeit perhaps continuing a process that had begun in the Ubaid 2 (Oates 1987b). Thus, for some areas, the Ubaid period runs only from about 5300 to 4300 B.C. (Akkermans and Schwartz 2003: 154–56, 184–86). Even within this shorter span it should be remembered that there is ample time for considerable social change between the start and the finish of the period, and generalizations regarding the nature of society within the Ubaid period as a whole may be misleading.

With very rare exceptions (e.g., Berman 1994), most scholars working on Iranian material eschew the term Ubaid entirely, preferring to adhere to local type-site and chronological nomenclature arranged into broad divisions of the Chalcolithic, albeit often acknowledging or tacitly accepting connections with the Mesopotamian Ubaid (e.g., Henrickson 1989; Pollock 1989; Stein 1994; Hole this volume). The use of local terminology has the great advantage of averting the assumptions of unequal core and periphery relations that bedevil many studies of sixth- to fifth-millennium societies in northern Iraq, Syria, and Turkey. On the other hand, local terminologies can obscure the close connections that arose periodically between southern Mesopotamia and parts of western and southern Iran, as demonstrated by almost identical ceramic assemblages at certain times, particularly during the Early Middle Susiana/Ubaid 1–2 periods.

(3) *A "Culture."* Oates' scheme was based on the ceramic sequence of Eridu and was intended specifically as "a useful division of *time* within … a related sequence of cultural materials" (Oates this volume, her italics). Oates' emphasis was on the chronological utility of the framework, but associated cultural elements were, quite rightly,

[1] The colors of paint vary from black to brownish, purplish and dark greenish, while the fabric shades from buff to reddish brown and greenish brown.

oi.uchicago.edu

considered to be relevant to the study of the people who used the pottery. Problems arise, however, when these elements are considered to be representative of an "archaeological culture" (see below), and many scholars therefore avoid the term "Ubaid culture," instead referring simply to "the Ubaid," or use neutral terms such as "Ubaid phenomenon." The unspoken word "culture" nonetheless shadows such non-committal terminology. Some authors have therefore attempted to find alternative terms and concepts, the most viable being "interaction sphere," "*oikumene*," and "horizon style," as suggested by Gil Stein (Stein and Özbal 2007; Stein this volume), or somewhat wordy constructions such as "communications and exchange network" (Nissen 2001: 170). These concepts are discussed in more detail below, but the question is whether we take an essentialist view that there existed an overarching external cultural or symbolic framework within which local groups participated to variable extents according to their specific needs and requirements, or whether we believe that the observed commonalties reflect simply the outcome of the responses of various local communities to a range of comparable opportunities and threats, as these could best be mediated given the array of resources available.

A Working Definition

As explained below, the authors have doubts as to the analytical value of the term "Ubaid," but for the purposes of the present discussion we define the Ubaid horizon simply and broadly as "the aggregate of sites, site phases, or assemblages that contain Ubaid-like black-on-buff pottery." Pottery is the defining characteristic simply because it is the single factor found in all assemblages that have historically been described as Ubaid. The authors make no claim in this definition for the primacy of such pottery above that of other recoverable aspects of material culture. The term "Ubaid-like" presupposes the existence of a style that is commonly recognizable to specialists in the archaeology of the region, arguably a subjective categorization. Although based on the original definitions of southern Mesopotamia, the term "Ubaid-like" should include all stylistically related black-on-buff ceramic traditions in the north and in western Iran (but see Weeks, Petrie, and Potts this volume, for the pitfalls surrounding the term "related"). Note that the Ubaid horizon as defined here would include assemblages that have never been previously described as Ubaid (particularly Bakun and other Iranian traditions), as well as certain assemblages where Ubaid pottery is not of local origin, being present purely as imports (e.g., in the Persian Gulf). The degree of variability is very high: in some cases or regions the site assemblages might previously have been described as wholly Ubaid (e.g., during certain periods of the southern and northern Mesopotamian sequences), whereas in others the Ubaid element may be very small, particularly along the geographical and chronological limits of the black-on-buff distribution. In the Persian Gulf the presence of a single imported Mesopotamian sherd has sometimes been enough to cause the site to be described as "Ubaid" or "Ubaid-related," while at Godedzor in Armenia (Chataigner this volume) the "Ubaid" element consists of black-on-buff sherds made in the Zagros, found as a minority among an unrelated local assemblage. At the southwestern end of the distribution only five or six "Ubaid" sherds out of nearly 4,000 sherds were identified from the mid-fifth millennium (calibrated) B.C. occupation at Arjoune VI, southwest of Homs (Campbell, Mathias, and Phillips 2003: 36), and it hardly features among surface collections at sites along the Orontes Valley north and south of Homs (Philip et al. 2005). We have chosen this very broad definition of the horizon as a pragmatic acceptance of the way in which many archaeologists use the term, and on the understanding that the very wide variation it encompasses is fully acknowledged. Some sites or regions which would be included using our definition (e.g., those in the Persian Gulf, the Caucasus, the upper Orontes Valley) should not be considered "Ubaid" in any cultural sense. It is simply the presence of the pottery that leads to their inclusion in the Ubaid Horizon. This is an important distinction and underlines our general preference for regional terminologies and sequences over the broad label "Ubaid."

Problems with the Term "Ubaid"

The existing type-site terminology ("Ubaid") contains inherent core-periphery assumptions. Oates' identification and naming of the ceramic horizons in the south was coupled with the recognition that they represented a long and indigenous development in that area. Conversely, the application of the terminology to northern Mesopotamia, and the recognition that it appeared to be the later styles that were present there, embodied the assumption of a

oi.uchicago.edu

spread from elsewhere, in which the Ubaid superseded the local Halaf ceramic tradition. Thus, ceramic continuity in the south is compared to a presumed break in the north, and this contrast has become a key element within scholarly narratives (see Karsgaard this volume). An assumed south-Mesopotamian primacy, which is further addressed below, went unquestioned. We might even ask whether the very notion of an Ubaid network based around an "advanced" center was not, at least in part, the product of the colonialist perspectives that characterized research in Mesopotamia during much of the twentieth century (Bahrani 2006: 52–53).

A better alternative to the term "Ubaid" might be the "Near Eastern chalcolithic black-on-buff ware horizon," which could be shortened to the "black-on-buff horizon."[2] We are aware that other scholars may prefer different definitions, and rather than impose our view, we have simply asked the contributors to this volume to specify the way in which they use the term. We have decided not to press for the abandonment of the term "Ubaid" at present for three reasons:

(1) its current widespread use;

(2) the general reluctance among the participants at the conference to complicate matters with a new terminology that would be adopted partially at best;

(3) our feeling that the term "Ubaid" will gradually atrophy as research continues to move beyond material-culture sequences and culture-history, and researchers find it no longer "fit for purpose."

To clarify the latter point, several recent critiques have challenged the assumption that chrono-cultural entities such as the "Ubaid" and "Halaf" can be considered as both units of description and interpretation (Campbell 2007; Campbell and Fletcher this volume; Karsgaard this volume). Given that many participants agree that the evidence does not point to the playing out of a single core identity, but is better understood as a product of continuous, incremental, and locally diverse developments, albeit loosely connected in some way, then we expect a growing number of scholars to prefer to deal with local sequences and their interconnections, free from the limitations imposed by the straightjacket of the Ubaid.

CULTURE, CORES, AND TRANSMISSION

Notwithstanding our interest in local sequences and trajectories, we acknowledge that certain elements of material culture and behavior frequently occur alongside the black-on-buff pottery within the broader Ubaid horizon, including flanged disks ("labrets"); clay nails and bent clay mullers; "ophidian" figurines (see Daems this volume); tripartite architecture; niched-and-buttressed public buildings; and the use of communal cemeteries. To this list can now be added the use of circumferential headshaping (Lorentz this volume). The distributions of these traits are not identical, however, and there is a significant degree of regional variation (Stein and Özbal 2007: 333–38). In Stein's words (this volume), the Ubaid is characterized by "a relatively small set of stylistic forms and ideological structures that were shared to varying degrees by a diverse set of regions" (see also Hole, Campbell and Fletcher, and Pollock this volume). Variation is due partly to local differences in prior social and environmental configurations, which inevitably influence interactions within and between communities and therefore the process of cultural change and transmission. In Stein's view, the meaning of artifacts, styles, and symbols that we might see simply as "Ubaid" would have been transformed according to their local context, an observation also made by Asouti with regard to PPNB mortuary practices (Stein 2002: 907–08; Asouti 2006: 117). To take an example, the role of Ubaid pottery among the pastoral nomadic communities of the Persian Gulf littoral (Carter 2006) would have been very different from its place in the sedentary farming societies of Iran, Anatolia, and Mesopotamia. Another case in point is the symbolism and personal experience of tripartite buildings, which are often treated as a key element in an assumed "Ubaid" material culture. These would have been perceived very differently in Değirmentepe, where they were agglomerated in typical Anatolian fashion and accessed via the roof (Stein and Özbal 2007: 336–39; Gurdil this volume), compared to settlements in the Hamrin, where such buildings were freestanding and accessed via conventional doors.

---

[2] Beware, however, the potential confusion with the BOB (black-on-buff) ware of the Central Zagros, as defined by Henrickson (1989: 377).

oi.uchicago.edu

The dichotomy between variation and common elements of material culture is one of our major challenges. The normative or essentialist concept of the archaeological culture (Childe 1956: 123) was formerly used to explain the repeated co-occurrence of elements of material culture. In its most sophisticated exposition, Childe's concept allows for distributions that are overlapping but not congruent (Clarke 1978: 247), but the problems with this approach have been apparent for several decades (Trigger 1968: 530; Shennan 1994: 5–14; Asouti 2006). The "archaeological culture" is now largely rejected as an explanatory framework, notwithstanding a recent resuscitation in an analysis of the Neolithic Near East (Kozłowski and Aurenche 2005). The counter-arguments are not be revisited here except to emphasize that it is impossible to be sure whether the area of a supposed archaeological culture is real or a product of the observer and the vagaries of data collection. If there is continuous variation in material culture and repeated interaction between communities, cultural regions or horizons will appear to exist around any arbitrary choice of type site (Renfrew 1984: 35–37). This indeed appears to be the reality behind the definition of certain archaeological cultures in Mesopotamia, including the Halaf, the "Local Halaf" of the Amuq, and the Samarra (Campbell 1999: 573–74, fig. 3). Because of its type-site origins and inherent core-periphery bias, we and several contributors (Karsgaard, and Campbell and Fletcher in particular) reject the notion of an "Ubaid culture" with definable boundaries.

How then do we understand a prehistoric phenomenon of vast geographical and chronological extent, in which material culture similarities are displayed across different classes of artifact, but which has attenuated boundaries or none at all and no undisputed core? This ontological issue is at the heart of the Ubaid horizon and is relevant to numerous prehistoric contexts throughout the world, perhaps most experimentally the PPNB "Interaction Sphere," which covered much of the northern part of the region during from the ninth to the seventh millennia B.C. (for an insightful discussion of the PPNB, which reaches much the same conclusions as this contribution, see Asouti 2006: 90, 117). One of the first steps is to identify the degree to which cultural elements are transmitted together or occur independently. The concept of cultural cores (Shennan 2002: 78–83; Holden and Shennan 2005: 16), comprising connected elements of behavior, style, and even language and ethnicity, which tend to be transmitted together vertically down the generations, is being explored at University College London through the Arts and Humanities Research Council Centre for the Evolution of Cultural Diversity. Here, numerous studies are examining the degree to which culture is vertically transmitted in a process resembling phylogenetic descent, using cladistic techniques borrowed from the biological sciences, as opposed to horizontally transmitted, that is, adopted from different groups (Mace, Holden, and Shennan 2005). It is already clear from these analyses that the relative prevalence of vertical or horizontal transmission is highly contextual, and that the contributions of each vary widely between different case studies. Openness to the adoption of external stylistic, ideological, and behavioral traits is dependent upon existing social configurations. For example, it was found that Turkmen carpet designs were transmitted predominantly vertically, with little outside influence, due to a strong tradition of endogamy coupled with limitations on the movement of women, who were exclusively the weavers (Collard and Tehrani 2005: 126–27). In contrast, styles of Californian basketry were freely exchanged between population groups, through active networks of local interaction and exchange (Jordan and Shennan 2005: 189–90).

A collection of core traits could be posited for the Ubaid horizon, perhaps including ceramic style, tripartite architecture, flanged discs, and head-shaping. This is in tune with Stein's model (this volume), which allows the existence of a set of shared elements around which some kind of "Ubaid identity" was constructed, albeit with regional variations. Such core traits would have been, to varying degrees in different areas, tied together by an overarching ideology (Stein this volume). However, cultural cores of linked elements are generally considered to be more associated with vertical (phylogenetic-like) transmission, as opposed to horizontal diffusion or ethnogenesis (Holden and Shennan 2005: 16), a distinction that may be hard to square with traditional notions of Ubaid expansion. Our position is that a core of Ubaid traditions may exist, but that it is not necessarily indicative of vertical transmission through descent, that is, its existence need not mean that Ubaid traits were spread through demic expansion. A more cautious position is that, until considerable refinements are made to our understanding of the chronological and geographical distribution of tightly defined artifact types, styles, and architecture, we should assume that elements of material culture functioned as independent packages (Holden and Shennan 2005: 16), with individual sites acting as nodes in a series of overlapping networks (see also Parker this volume). The similarities almost certainly reflect contacts between communities of broadly comparable scale, faced with many of the same problems and opportunities, and which would have had to respond using many of the same material and human resources. Under such a scenario a pattern of inconsistent commonality across a wide area would not be a surprising outcome.

oi.uchicago.edu

AN UBAID IDENTITY?

Did the archaeologists' "Ubaid horizon" have any meaning to those who lived in it? According to several contributors (Stein, Croucher, Lorentz), deliberate decisions were made to adopt Ubaid styles and practices as part of an overt acceptance of an ideology, and the notion of belonging to that ideological world was signalled through the deliberate manipulation of identity. But were the people of the ancient Near East exercising choice when using that pottery, or were they simply operating within the bounds of accepted local practice? We need to ask whether archaeologists would have placed so much emphasis on the pottery or architecture had the data been examined free from the expectations imposed by a pre-existing "Ubaid" lens. Cross-regional similarities in these fields may be more apparent to modern scholars in drawings and ground plans than to the ancient users in their daily experience. For example, how aware were those who used Ubaid-style pottery of the fact that they were partaking in a wider stylistic and social phenomenon? One might suspect that for most, awareness was restricted to practices within their own communities and a few neighboring ones, although as Karsgaard observes, small numbers of individuals with wider contacts may have been important as links in a wider chain of transmission and comprehension.

Both personal identity and social identity can be manipulated and broadcast, the latter being defined as "the knowledge, value and significance attached to membership of a social group" (Knapp 2008: 31). It is acknowledged that multiple identities can be maintained by a single individual (Knapp 2008: 33), and these can be accentuated or suppressed according to social context. Thus, in cases such as the northern Ubaid, where some traits deemed characteristic of the preceding Halaf period continued in use alongside the emergence or adoption of elements of Ubaid material culture, it may be that these were not accidental survivals of some mysterious acculturation process, but the conscious maintenance of a regional social identity, held in tandem with a broader interregional Ubaid identity. Stein's observations (this volume) regarding the differential rates of change between aspects of public and private social identity at Tepe Gawra are significant, as they underline the flexibility and multivalent nature of identity and identity change. Schortman's concept of salient identities is also relevant here, comprising a set of affiliations or social identity traits that promote a strong feeling of common purpose and support, and which can be instrumental in promoting interregional interaction (Schortman 1989: 54, 58–59). Although it is usually elite interactions which are implicated in this kind of identity formation, Schortman admits the possibility that non-elites may "under certain circumstances engage in intense contacts which transcend local social boundaries and, hence, form interregional salient identities" (Schortman 1989: 61). As noted below, the ambiguous presence of elites across the Ubaid Horizon means that non-elite interaction must be seriously considered as a factor behind its emergence.

The problem of elites is also relevant to Stein's adoption in this volume of the concept of the interaction sphere in his characterization of the Ubaid horizon. The concept originates in Caldwell's analysis of the Hopewell phenomenon in the Mississippi River basin (Caldwell 1964) and was developed to explain the wide distribution of specific elements of material culture and behavior, which encompassed different environmental and ethnic areas. The emergence of this common identity or symbolic language was created and maintained by intensive information and exchange networks among elites. Yoffee frames a definition that includes considerations of practice and identity, describing an interaction sphere as "a systematic, normative set of activities that link people in such a way that a significant part of their identities are defined by such interactions" (Yoffee 1993: 258). Since Caldwell's proposal, the term has been used with varying degrees of exactitude and commitment to describe other archaeological phenomena. Examples from the Middle East include the Levantine Pre-Pottery Neolithic B (Bar-Yosef and Belfer-Cohen 1989), the Halaf (Yoffee 1993: 265), and the Ubaid itself (Carter et al. 1999: 56; Yoffee 1993: 262; Asouti 2006). At the conference, it was observed that the equivocal evidence for elites within certain regions of the Ubaid horizon, or alternatively, the avoidance of overt elite display, is not compatible with an interaction sphere as originally defined. Stein also observes (this volume) that the most visible element of Ubaid material culture — pottery — should not in most cases be connected with elite status. Therefore, if it is to be used for the Ubaid, Caldwell's model must be modified to encompass a significant role for interactions at a non-elite level.

It must also be stressed that the putative interregional Ubaid identity may have developed from many different regional roots, as opposed to the conventional model of an expansion from southern Mesopotamia, and as such may never have been fixed, but always in a process of becoming. There is already some evidence for this: circumferential head-shaping, a practice that requires considerable commitment and planned participation in a long-term train of events, appears to have an Iranian origin rather than a Mesopotamian one (see Lorentz this volume), hinting that the elements of an Ubaid identity emerged from a vast inter-regional melting pot of influences rather than a single core

oi.uchicago.edu

(see also Karsgaard this volume). We might say that the Ubaid not only had regional manifestations, but also hybrid regional origins.

EXPANSION AND ACCULTURATION VERSUS INTERACTION AND TRANSFORMATION

The title of the conference in Durham was intended to focus attention and debate around the question of whether the Ubaid should be regarded primarily as the product of influence or even intrusion, that is, migration, from one region into another. This and related issues are alluded to above, but further examination is merited.

MIGRATION

Although the possibility of movement of people as a colonizing group, perhaps motivated by trade, is acknowledged (Frangipane 2001: 321; Oates 2004: 95, 98; Stein and Özbal 2007: 332; Thuesen 2000; Wengrow 1998: 791), the prevailing opinion of the conference participants is that the Ubaid was not primarily the result of demic expansion, a viewpoint already voiced by some previous scholars (Berman 1994: 29; Stein 1994). Stein is the most explicit in this regard: "Ubaid material culture spread to the north peacefully through some combination of trade and the local appropriation of Ubaid social identity and ceremonial ideology, rather than actual colonization." In support of this scenario, DNA analysis, as well as studies in skeletal morphology, indicate a continuity of population from pre-Ubaid to Ubaid times at a small number of northern sites (Özbal this volume). Further studies of this kind are required to confirm this pattern, however, and we would be foolish to exclude entirely the possibility of some movement of population at certain times and places, beyond that of trading partners. The importance of migration in the spread of people with associated material culture and behavior has regained prominence in archaeological discourse (Greenhill and Gray 2005: 31; Knapp 2008: 51), supported by some recent isotopic and genetic analyses. For example, there is now isotopic evidence to argue that the Bell Beaker horizon of the European Bronze Age was associated with a spread of immigrants (Price et al. 2004), while the distribution of figurines and painted pottery in Neolithic southern Europe follows that of certain Near Eastern Y-chromosome lineages, testifying to the spread of agriculturalists from the latter region (King and Underhill 2002).

ACCULTURATION

The modified interaction sphere framework proposed by Stein bears some similarities to existing acculturation models (Breniquet 1989, 1996; Frangipane 2001: 322), though Stein is careful to avoid previous assumptions that northern (Halaf) communities adopted aspects of southern (Ubaid) material culture and ideology because of some kind of unspecified yet manifest superiority (Breniquet 1996: 21–22, 32). We argue that assumptions of dominance, which are intrinsic to the acculturation model (Knapp 2008: 53; Stein 2002: 905), must be avoided. The term "hybridization" is perhaps more satisfactory than "acculturation," though even this presupposes the existence of colonists (Knapp 2008: 57–58). Breniquet suggests that the borrowing of Ubaid material culture was expedited by matrimonial exchanges of women, assumed to be the producers of the pottery (Breniquet 1987: 236), a scenario elaborated upon by Forest with regard to the caches of tokens found at Tell Abada (Forest 1989). Proof of this scenario would require confirmation of both female specialization in ceramic production and careful study of design elements and manufacturing practices within groups of proximal settlements. Moreover, while exogamous marriage with patrilocal residence may have been prevalent at certain times and places, it would be a major assumption to regard the exchange of women as the driving mechanism for the propagation of a ceramic style of this spatial and temporal duration.

oi.uchicago.edu

DIRECTION AND INEQUALITY

The traditional opinion, which prevails even in many recent publications and in many of the contributions in this volume, is that the Ubaid should be seen as a southern Mesopotamian phenomenon that spread to the north (Frangipane 2001: 321; Oates 1993: 408–09; Roaf 1990: fig. p. 53; Thuesen 2000; Yoffee 2005: 209). An alternative perspective is proposed in this volume. Campbell and Fletcher question the directionality of the model and the reality of a transitional phase between two supposedly more meaningful entities (Halaf and Ubaid), suggesting that the conventional period terminology is ill-suited to a reality that might be best understood as continuous incremental change, largely effected at the level of local communities. Karsgaard strongly challenges the supposed spread of innovations from southern Mesopotamia, stresses the likelihood of symmetrical relations, and suggests that the similarities in material culture arose in both the north and south as a result of region-wide social change, including altering perceptions of the role of the individual, mediated through peer interactions. Regarding chronological primacy, there are startling results from Domuztepe (Campbell and Fletcher this volume), which appear to show "Ubaid" elements in the ceramics as early as the first half of the sixth millennium B.C. (calibrated). Moreover, the sherds in question compare with material of the Ubaid 3 or 4 phase and do not show the Ubaid 1 or 2 parallels that we might expect from material of that date, if southern templates were being copied. Thus there is the possibility that the greenish buff ware with designs in black paint deemed typical of Ubaid 3/4 was present in the north well before these styles appeared in the south. The apparently anomalous dating of the ceramic assemblage of Kenan Tepe, where the radiocarbon dates diverge from those expected on the basis of typological parallels, raises similar issues (Parker this volume). While these situations cast a new light on the direction of influence, they also highlight the circularity inherent in using ceramic typology to assign different Ubaid occupations to relative chronological positions without the control offered by radiometric dating techniques. The ease with which new radiocarbon dates have undercut some of our core assumptions highlights the problem.

As noted above, there are inherent assumptions of differential complexity in the traditional south-to-north model. Some contributors strongly question the assumption that southern society was more complex (e.g., Oates, Karsgaard), pointing to the greater prevalence of administrative technologies, such as seals, in the north. Conversely, Gibson argues that southern society was more complex at this stage, even to the extent that kingdoms existed there, and that contact stimulated developments in the north. While we acknowledge that this crucial issue remains open to debate, we welcome the questioning of the south-to-north expansion model and note that even if we accept the outward diffusion of southern Mesopotamian influence in some respects, for example, in pottery style, we should not assume a similar flow in other fields. For example, current survey data suggest that the north was more densely populated than the south during the Ubaid period (Wilkinson 2000: 244). We also note the arguments that question southern primacy in the emergence of urbanism during the subsequent Uruk period (Rothman 2004: 95; Gibson et al. 2002: 58–60; Gibson this volume; Oates et al. 2007: 597–98).

INTERACTION

While we prefer "interaction" over demic expansion and acculturation as mechanisms for the generation of a set of apparent cultural regularities, we accept that a closer examination of the former concept is required.

MULTIPLE SCALES AND TYPES OF INTERACTION

It is important to recognize that interaction occurs on a multitude of scales. Long-distance trade has long been considered a stimulus behind societal change and interregional integration in the Near East, from the Chalcolithic to the Bronze Age (Algaze 1993; Breniquet 1989: 327–29; Oates and Oates 2004; Lamberg-Karlovsky 1972; Kohl 1989). Many authors have noted the potential importance of long-distance relations during the Ubaid period (Algaze 1989: 591; Oates 1993: 408–09; Thuesen 2000: 71; Oates and Oates 2004: 180–84; Stein and Özbal 2007), albeit sometimes to remark on the frustrating lack of evidence for such exchanges in the archaeological record (Stein 1994: 40). While some authors posit small groups of traders or even colonists engaged in long-distance trade, others look to the florescence of full-time pastoral nomadism as a stimulus to long-distance interaction, particularly

oi.uchicago.edu

movement between highland and lowland zones in a pattern of vertical migration (Alizadeh 2006: 23, 96; Abdi 2003: 435). The potential role of nomads in longer-distance exchange of obsidian was raised by Crawford (1978), and it has been proposed that cycles of horizontal migration between Mesopotamia and Arabia could account for the distribution of Ubaid pottery there (Masry 1974). Some doubt the role of nomads in the distribution of goods and ideas, however (Cribb 1991: 14), and it remains difficult to prove significant nomadic involvement in long-distance trade. Although, for example, the Ubaid-like black-on-buff pottery at Godedzor, Armenia, is considered to have been brought there by pastoralists migrating seasonally from the Lake Urmia region (Chataigner et al. this volume), the current evidence points only to a very limited trade in a particular kind of obsidian over short distances, as far as Lake Urmia. Helwing and Seyedin and Weeks, Petrie, and Potts (this volume) all question the putative role of nomads in the transportation of goods in western Iran, while Masry's model for Arabia has been challenged by alternative models of redistribution through ceremonial exchange among Arabian Neolithic groups, following transportation by sea from Mesopotamia (Carter 2006).

Less attention has been paid to interactions across shorter distances, which we might expect to have been a very significant mode of human action, and we contend that multiple scales of analysis should be used to examine multiple scales of interaction. This was realized by Henrickson, who considered that interaction between the communities of the Hamrin and the Mahidasht was characterized by "an unconnected series of low-level 'non-systematized' individual social (kin-based?) and economic transactions, rather than the archaeologically visible results of any long-distance commodity importing process" (Henrickson 1989: 394). Habitual and repetitive exchanges with nearby communities, conducted as part of routine practice (see below), may have included the trading or collection of mundane finished goods, staples, and raw materials, perhaps including pots (see Yamazaki, as well as Helwing and Seyedin this volume), as well as textiles, types of stone, basketry, livestock, fish, and firewood. That such materials would have been differentially available seems reasonable in light of hypothesized differences in the degrees and fields of specialization between communities. Specialization might be hard to discern archaeologically and may have arisen from minor differences in the disposition of natural resources. Trentin's paper shows that sites in the Balikh cluster easily within one day's walk there and back, and regular minor economic exchanges between neighboring villages are likely. The emergence of a settlement hierarchy with central places, which would attract the surrounding population as centers of economic exchange and political power, as well as ideological and religious activity, would have encouraged networking and interaction. Such a hierarchy is already evident in northern Mesopotamia in the Balikh and the north Jazira (Wilkinson, Monahan, and Tucker 1996: 19–21; Wilkinson 2000: 233–35), though the situation is less clear in the south. Similarly, the very high density of Ubaid settlement observed around the large site of Tell Brak (see Karsgaard this volume, fig. 4.4) appears to offer a very different range of possibilities in terms of ease, scale, and intensity of communications than the far lower densities recorded in the Orontes Valley region of west Syria (Philip et al. 2005: 38).

Matrimonial exchanges, whether or not similar to those envisaged by Forest (1989), would have created a web of kin relations and social bonds that encouraged regular communication between settlements. These could have been with neighboring communities, but may also have been arranged across longer distances, greater than one day's travel. Apart from marriages, a wider variety of inter-communal events could have occurred at different degrees of frequency across these scales, including regularly scheduled religious festivals or deals in goods and livestock, and more sporadic events such as weddings, meetings held to cement alliances, or events of ceremonial exchange (Dietler and Hayden 2001; Hayden 2001; Helwing 2003).

Such repeated contacts, which may have involved carefully structured and routinized modes of action, would have functioned like webs linking individuals, households, and communities, encouraging and even constituting particular patterns of behavior. The importance of objects and their appropriate forms and use within such "material conversations" (Robb 2007: 8) may have been vital to the generation of the similarities that are so apparent over time and space. Conversely, frequent multiple interactions also act as a conduit for innovation, and thus simultaneously promote both cultural homogeneity and change, the latter in particular in response to new circumstances or resources. Any intensification of interaction, perhaps resulting from ideological change or long-term processes such as demographic growth, economic diversification and specialization, or the development of central places, might have encouraged greater cultural homogeneity on the spatial scale, accompanied by a shared process of cultural transformation across the resulting style horizon. The coming together of several innovations, whether material, economic, or social and ideological, and perhaps transmitted over various distances, might have provided the push required to provoke a significant reformulation of a field of action, and the kind of outcome that we have generally observed as "cultural change." Clearly, the manner in which long- and shorter-distance networks were articulated is also critical.

oi.uchicago.edu

Karsgaard draws attention to research in network theory, which suggests that the impact of a relatively small number of long-range contacts can be much amplified if the individuals concerned are themselves well embedded within active local interaction systems, creating a "small-world" network or the "six degrees of separation" phenomenon (Watts and Strogatz 1998).

VARIABLE INTERACTIONS IN SPACE AND TIME

Differing degrees of similarity between ceramics of interacting regions during different chronological phases suggest that the nature or intensity of interactions varied through both space and time. For example, strong parallels between the assemblages of the Early Middle Susiana phase (e.g., Jowi I, Bendebal I) and the Ubaid 2 assemblage of Eridu, and to a lesser extent the Ubaid 1, imply close contact between southern Mesopotamia and Susiana from around the start of the Ubaid 2 period. This zone of interaction seems to have extended down the Gulf coast as far as Bushehr, judging from the pottery of H200, Halileh, which corresponds to the Early Middle Susiana assemblage.[3] In contrast, close contacts between southern and northern Mesopotamia are not demonstrated ceramically until the Ubaid 3 period (but note concerns raised above regarding the chronological reliability of these ceramic periods). By the later centuries of the fifth millennium (calibrated) B.C., the regions within the Ubaid horizon displayed clearly divergent trajectories, at least as far as ceramics are concerned.

Such observations are based on intuitive study and should be explored more rigorously using statistical comparisons. Various techniques can be used to compare assemblages, and existing work on Near Eastern Chalcolithic material may serve as a model for future research (Henrickson 1989; Irving 2001). Other studies have correlated ceramic similarity with distributions of sourceable material, including obsidian (Zeitlin 1994), in order to elucidate trade patterns. This has not yet been done in a Near Eastern context, but the studies by Henrickson and Irving both suggest that patterns of communication and exchange influenced the degree of similarity between the ceramic assemblages of different areas. Henrickson concludes that the Great Khorasan Road, a major ancient east–west communications route, encouraged ceramic similarities between the Hamrin and the Mahidasht regions during the Ubaid 4 period, while Irving notes that there was not a simple distance fall-off in similarities between assemblages, probably due to the existence of complex communication and exchange networks (Henrickson 1989: 394; Irving 2001: 393, 413). Moreover, Henrickson's study shows that relationships were not fixed through time: despite the closeness of the Ubaid 4 period assemblages of the Hamrin and the Mahidasht, there had been no sign of similarity during the Ubaid 3 period (Henrickson 1989: 379–80, 388).

These pulses of interaction must be studied on a regional case-by-case basis before a wider picture of Ubaid interactions can be developed. The existing analyses implicate networks of exchange, and these would have been subject to highly specific and, in some cases, unrecoverable narratives. One might, however, sometimes implicate alterations in local settlement patterns or long-term environmental change, both of which would have influenced population densities and ease of communication at different times.

COMPLEXITY, PRACTICE, AND SOCIETAL CHANGE

THE UBAID AS AN EVOLUTIONARY STAGE ON THE ROAD TO COMPLEX SOCIETIES?

Mesopotamia is generally treated in the comparative literature as the "classic" example of an early complex society and, as a result, the Ubaid was of interest as a key foundational stage in the archetypal early state trajectory. Moreover, for those scholars who sought an alternative to the traditional cultural-historical approach, the possibility of setting the Ubaid in new narrative, that of the evolution of complex societies, offered a way forward. A good example of this approach is Redman's (1978) textbook, which has been widely used in university courses. The ap-

[3] See Oates in this volume for an alternative perspective on the H200 pottery.

oi.uchicago.edu

proach taken in this volume was reflected in a rich stream of research focused around themes such as chiefdoms, social stratification, craft specialization, administrative operations, trade networks, and even colonies (Algaze 1993; Frangipane 1997; Stein 1999; Stein and Blackman 1993; Stein and Rothman 1994; Wright and Johnson 1975). Useful overviews of many of these issues have been made by Rothman and Stein (Rothman 2004; Stein 1998; Stein 2001).

However, this approach took shape at a time when absolute chronologies were less refined than they are today, and when the standard textbooks placed the southern Ubaid between the later fifth and mid-fourth millennia B.C., with its northern manifestation between the mid-fifth and late fourth millennia B.C. (Lloyd 1978: 36, table 3, 66, table 5; Redman 1978: 246, fig. 8.1). Under this chronology, the Ubaid was the immediate precursor to the major organizational changes that characterized the region in the fourth millennium B.C. The chronological separation that is now evident between the spread of Ubaid styles and the evidence for south Mesopotamian activities in the north during the Middle Uruk period (earlier fourth millennium [calibrated] B.C.) is so great as to render it hard to view these developments as connected, let alone homologous. Thus, while a better grasp of chronology has now removed the Ubaid from its previous close association with social complexity, many of our favored research questions (e.g., the possible emergence of large complex settlements, questions of social stratification and incipient elites, supposed southern interest in northern raw materials) have their roots in analytical frameworks that took shape in the 1970s, when the Ubaid was believed to end but a few centuries before the appearance of massive cities in southern Mesopotamia.

Developments during the Ubaid must therefore be clearly differentiated from the kinds of changes that are documented in the later fourth millennium B.C. (Algaze 2007), and that are characteristic of the transition to complex urban societies. We should be careful to consider the evidence from the Ubaid in the context of the prehistoric societies of greater Mesopotamia and treat these issues quite separately from those more strictly germane to the later development of complex societies, an approach that is reflected in many of the contributions to this volume.

PRACTICE AND SOCIAL TRANSFORMATION

While the very recognition of the "Ubaid" is based upon observable similarities in material culture, Pollock makes the point that the traditional archaeological emphasis upon formal similarities within material culture has led to a neglect of the practices within which particular material forms were involved. However, the regularities that we interpret as cultural phenomena result from the repetition of structured practice, mediated through particular material assemblages, and which form the basis of social reproduction. Practice-based approaches are now increasingly common in archaeology (Chapman 2000; Pollard 2001; Robb 2007), but have rarely been applied in the Middle East. The key is that emphasis is placed upon the social practices within which items of material culture are embedded, and which they also shape and modify. The Bakun pottery of Iran is a case in point, in that, while it is related to the Ubaid style, Pollock notes that the ceramics from Tall-i Bakun A were incorporated within a very different architectural setting and may have been used in divergent ways within daily practice from the Ubaid ceramics of Mesopotamia.

Several contributors (Campbell and Fletcher, Crawford, Karsgaard) point to the link between a certain material form, namely, decorated open vessels, and probable shared practices regarding the consumption of food and drink (see also Campbell 2000; Wengrow 2001). What has been interpreted as a "culture" may therefore represent the material residues of shared practices, expressed by societies across the region through similar material forms. It may have been simply a general association between the consumption of food and drink and decorated ceramics that was shared, and perhaps no more than a range of loosely related but locally quite variable practices. Note, for example, that while Karsgaard connects the pottery with "occasions" such as feasting, Pollock places more emphasis upon understanding pottery's use within routine daily practice, highlighting the importance of contextual as well as formal comparisons. The Ubaid is not unique in this respect, as the impact of changes in eating and drinking practices upon the overall character of ceramic assemblages is now well documented in other periods, for example, the Levantine Early Bronze Age (Bunimovitz and Greenberg 2004; Mazzoni 1994).

It is also important to be aware that practice applies not only to the use of material culture, but also to its production, which is itself deeply embedded within social relations (Dobres and Robb 2000; Lemonnier 2003). As Pollock observes, the stylistic similarities evident in the ceramic repertory across both time and space may reflect the constraining effect of "tradition," which she takes to mean accepted and unquestioned ways of doing things, and

oi.uchicago.edu

which by providing a degree of inertia may well have supported continuities of both practice and form. It is important that in our enthusiasm to document change we do not understate the importance of the elements of long-term stability that appear to be a feature of the Ubaid in many regions. Continuities in both manufacture and use may have been important in terms of social reproduction, with modification over time resulting from continuous processes of renegotiation in response to a combination of internal social dynamics and changing external environments. This resembles Giddens' (1984) concept of structuration, in that the actors (i.e., individuals, collectively comprising communities) would have sought to respond effectively to internal dynamics and external conditions, with the specific form taken by this response influenced by the nature of pre-existing circumstances, including aspects of social organization and tradition, and the material resources available. In particular, the concept of structuration allows the possibility that different groups within a community would have had sufficient flexibility to shape their response and to target particular desired outcomes. The net result of such processes over a number of generations would, of course, have been the gradual reshaping of local society along lines that were never planned or intended.

In this light, the well-documented region-wide temporal shift from an earlier style of highly decorated vessels (be these called Samarran, Hajji Muhammad, or Halaf) to later, simpler styles (Ubaid 3 or Ubaid 4), as noted by Hans Nissen (2001: 168–69) and termed "the evolution of simplicity" by Wengrow (2001), is explained as the result of parallel responses to changing social practices in both northern and southern Mesopotamia. This interpretation also removes the need to turn to either population movements, ill-defined notions of acculturation, or models of elite emulation (for which the archaeological record shows little evidence) to explain inter-regional similarities in ceramic style. In such a model neither north nor south needs to have primacy. Rather, we are dealing with multi-local transformations in which developments in parallel serve to reinforce each other. Our focus on the black-on-buff pottery traditions may have blinded us to parallel transformations outside, and on the fringes of the area generally included within the Ubaid horizon. A case in point is the site of Arjoune in the Orontes Valley, where an occupation dated to the mid-fifth millennium (calibrated) B.C. revealed a very low occurrence of Ubaid ceramics alongside the continued use of a dark burnished finish on bowls and jars (Campbell, Mathias, and Phillips 2003: 37). This raises the possibility that social practices concerned with food consumption, resembling those posited for the Ubaid in more northerly regions, may have extended into the upper Orontes Valley. However, in the latter case, these may have been materialized through vessels bearing burnished rather than painted decoration. It is possible, therefore, that the ingrained disciplinary preference for basing boundaries upon particular forms of stylistic evidence, in this case ceramics deemed to be diagnostic of the "Ubaid," might have resulted in the creation of archaeological distributions that cut across real continuities of practice. If we seek to define borders using material culture data, we need to move beyond simple stylistic distributions and examine assemblages in terms of the range of social practices that they would have facilitated.

ELUSIVE ELITES

Transformations in practice are indivisible from social modifications. The move toward pottery with simpler decoration was more than simply a technological development; it marked a shift toward an emphasis on communal identity and solidarity (see Karsgaard this volume), a pattern also reflected in the adoption of communal cemeteries. A progressive simplification of the pottery, as illustrated at Tell al-Abr (Yamazaki this volume), may, moreover, be a symptom of the "general drive towards specialization, standardization and increased output in the economy of the Near East" (Wengrow 1998: 790–91). This trend is also evident in non-ceramic fields, for example, evidence that hints at the production of woollen fabrics (Sudo this volume). In Wengrow's terms, aesthetic labor, previously invested in individualistic pottery decoration, became directed toward other goals (Wengrow 2001: 170, 182). It appears that, in some cases, attention was redirected toward the elaboration of public architecture, as indicated by Sievertsen's study (this volume), which shows how external-buttress architecture became restricted to, and elaborated upon, the facades of what are interpreted as public and semi-official buildings. Whether this architectural process should be regarded as the accumulation of symbolic capital by an empowered section of the society closely connected to these buildings, or whether one prefers to see it as an expression of cohesion by an essentially egalitarian community, depends upon one's position on the existence and role of elites during the Ubaid period. It is a measure of our lack of understanding of Ubaid-period societies that there is no consensus on either the existence of a marked social hierarchy at any given location or phase (Akkermans and Schwartz 2003: 178–79; Flannery 1999: 45–47;

oi.uchicago.edu

Frangipane 2001: 310, 2007: 164–65, 169), let alone the nature and role of the supposed public buildings (Forest 1987: 388–91; Rothman 2002: 73–75).

It is possible that stable elites existed or were emerging, at least in some areas, but that such groups chose either to mask their growing power or express it by means other than through conspicuous consumption and display. This may not have been entirely through choice. At this formative stage there may have been a generations-long dialectic between emergent elite and non-elite sectors of society, while the outcome of such a process would not necessarily have been clear to the participants (Joyce 2000: 85; Pauketat 2000). In such a framework, the investment of both real and aesthetic labor in public buildings, such as temples that served the needs of the whole community, would amount to an overt statement of corporate identity, serving to mitigate elite power and resolve conflicting ideologies of hierarchy and egalitarianism. Thus, both the simplification of ceramics that characterizes the Ubaid horizon and the widespread absence of clear material evidence for elites might have resulted from the specific avoidance of ostentatious divisive displays of wealth and power by incipient elites. This would be in accordance with several analyses of the Near Eastern evidence, which emphasize that chiefly power may have depended on networks of alliance and control of local resources, as opposed to acquisition of exotic materials and flamboyant display of wealth and status (Flannery 1999: 46–47; Frangipane 2007: 169; Stein 1994). The use of communal cemeteries and the absence of elite burials loaded with sumptuary goods may, for example, have served to mask asymmetrical social relations in the world of the living, effectively a process of deliberate misrepresentation (Shanks and Tilley 1982: 151–52). It is also possible that power in the societies of the sixth and fifth millennia B.C. retained a contested and rather transitory quality, with its expression subject to frequent and situation-specific renegotiation, as a result of which enduring elites of the kind documented in later periods remained hard to sustain.

THE END OF THE UBAID?

In our view "the Ubaid," as currently understood by most scholars, is extrapolated from a small number of features whose co-occurrence has not been sufficiently tested, and which remains inseparable from discredited cultural-historical models. Moreover, its retention forces scholars to work with an analytical framework that is not readily compatible with current research questions in archaeology. Because of the constraints and prior assumptions which it places upon analysis, its continued retention is likely to limit the potential of new datasets and analyses. We challenge, for example, the assignation of far greater importance to communities' common usage of painted bowls, than to the very significant differences in ideology, temporality, sense of space, and notion of value that would have resulted from frequently major contrasts in their modes of subsistence. We suggest that the unity of "the Ubaid" may be more apparent from the perspective of the archaeologist's gaze, in particular if this is focused on pottery, than it would ever have been to past communities. That said, the model of linked core elements comprising an "Ubaid identity," shared to differing degrees within an interaction sphere, is powerful. This model can and must be tested.

In our discussion we have expressed our doubts as to the value of commonly used concepts such as cultures, cores, boundaries, expansion, acculturation, and asymmetric relations between population groups. If these are set aside, we are left with the term "interaction," a term that has the virtue of neutrality but which is nonetheless a weak hermeneutic tool. How, therefore, can we hope to negotiate the now-formless sea of data? In the first place, we do not argue that these terms and concepts should be rejected out of hand; we argue rather that they should not be assumed. Secondly, interactions themselves should be more closely defined through contextual and multiscalar investigations (see also Asouti 2006: 111–12, 117). What we call "the Ubaid" may well be the product of an intensification of interactions on a multitude of scales and through different media, and a recognition of the discursive and contingent natures of interaction, cultural transmission, and societal change is critical. Underlying causes for intensification could include demographic expansion, cumulative technological advance, and social and cognitive changes, but attempts to identify a single cause will certainly fail.

In the event that the term "Ubaid" is dropped from discussion, some might ask how we would identify or recognize the web of traits with which the term has come to be associated. The answer is that we should not prioritize this. Traits can be investigated independently, and should not be approached on the assumption that they are linked by some pre-existing common connection. The range of phenomena, hitherto bundled together, must be disentangled. Only then can we discover the individual importance and implications of the various components, some of which we suspect have not yet been accorded their due significance. We therefore still need to build from the bottom up, using

oi.uchicago.edu

basic archaeological methodologies, and must continue to conduct regional and contextual analyses to refine local chronologies and their synchronicities with distant equivalents, and to tighten our understanding of cultural connections in time and space. New areas for analysis could include further provenance analyses of pottery and other materials (stone, bitumen, metal in some areas) to identify circulation and communication patterns. There is also a need to examine how traits traditionally linked with the Ubaid were transmitted, both through time and across space. The issue of cultural transmission is at the heart of social and cultural replication and change, and there is much scope for theoretical work on ethnogenesis versus phylogenesis, symbolism, ideology, identity, and the transmission of meaning. Relevant analyses of data might include statistical comparisons of pottery styles and other artifact assemblages using similarity coefficients, and cladistic analyses of assemblages as they develop through time, but with appropriate consideration being accorded to context as well as form. Distribution maps of artifact types and styles are a basic but important tool. Recent work by Kozłowski and Aurenche (2005) might serve as a model for the latter, although we reject their embedded cultural-historical framework. The goal would be to establish which of those features traditionally associated with the Ubaid were genuinely transmitted together as a package, and which as independent variables.

In these studies we must adopt an approach to the excavation and recording of material culture that will support detailed contextual analysis. If we are to work at the level of routine practice, it will be helpful to broaden our recording to embrace criteria such as the size and volumes of vessels (Roaf 1989; Schaub 1996), as well as general forms and decoration. To that extent, we must not be blinded by style: as Pollock demonstrates, a detailed examination of ceramic assemblages allows us to investigate the extent to which material from different sites or regions was implicated in similar or different social practices, regardless of general cultural assignations. The same is true of other classes of artifact, including ecofactual evidence.

Above all we need to continue to develop a better understanding of the social organization of the diverse communities which together have been taken to comprise the Ubaid horizon, region by region and throughout its immense span of time. Once these steps are taken we will be in a better position to understand the meaning of the material and practices previously subsumed under the term "Ubaid," both in terms of long-term processes, and to a lesser extent to the individuals and communities who created it through their daily engagements with each other and the world (for a similar exhortation with regard to the PPNB, see Asouti 2006: 106, 111). The sixth and fifth millennia B.C. witnessed a combination of both stability and innovation. Alongside the consolidation of mixed farming economies, albeit with different emphases in different regions, the period witnessed humans grappling with new material forms and media and new ways of organizing people and their activities. A key linking concept is "material entanglement" (Hodder 2006, after Gell 1998), referring to the complicated relationship between material culture and people and the way in which objects (including the human body — see papers by Daems, Lorentz, and Croucher in this volume) become embedded within social relationships, and their perpetuation and modification over time. The elaboration of ceramic decoration on pottery, and the association between pottery and food consumption, itself a key arena for the creation and negotiation of social relationships, is in itself not surprising. Nor should it seem unusual that such a simple and successful material association would have been rapidly transmitted across a wide swathe of the Near East during the sixth millennium (calibrated) B.C.

Equally, the subsequent simplification of designs which has been taken to characterize later Ubaid ceramics, and the final dissolution of widespread painted styles (i.e., the end of the Ubaid), can sensibly be read as responses to wider changes such as the availability of new materials with which humans could work, including metal and wool, although unequivocal evidence for wool production does not appear until the fourth millennium B.C. (McCorriston 1997: 521). Of course, trends detectable in material culture cannot be dissociated from changes taking place within human societies at this time, including the emergence of new categories of person, or the reformulation of existing categories in response to the opportunities both for practical engagement with, and the material expression of, new materials and techniques. If Sudo (this volume) is correct in seeing the appearance of woollen cloth during the fifth millennium B.C., its introduction would have offered new possibilities in terms of fabric production and perhaps its decoration, new types and locations of work activity with potentially different impacts upon different sub-groups within the community, a changed emphasis upon the size of herds and their management techniques, and new (woollen cloth) or potentially revalued (sheep) materials upon which people could draw in the materialization and continuation of social relationships (see McCorriston 1997). Given the likely ramifications of change in one such field, it is not hard to imagine how the aggregate of changes over a number of aspects of community activity would have impacted quite significantly upon existing practices and their material expressions.

oi.uchicago.edu

The diversity of the trajectories taken by post-Ubaid societies clearly underlines the variability between the various groups using black-on-buff ceramics as a material resource. To develop our earlier discussion regarding the connection between material culture and fields of action, it is likely that what has traditionally been seen as the dissolution of the Ubaid reflects varying local responses to a range of new possibilities, including both new resources and continually developing social, economic, and organizational structures. Such changes would have had a transformative effect on practice, with a concomitant impact upon existing sets of material culture, some of which would have been rendered redundant. Moreover, the different responses of fifth-millennium B.C. communities to these developments would have served to further increase the variability between groups, thus delivering what we have read as the disappearance of the Ubaid.

This introduction has been more deconstructive than constructive, as we have sought to remove the conceptual debris that we see as obstructing research on the later prehistoric societies of the region: reconstruction begins with the ensuing papers. We hope that a new and more powerful understanding of Middle Eastern prehistory, and prehistoric interactions in general, arise from these contributions.

BIBLIOGRAPHY

Abdi, Kamyar

2003 "The Early Development of Pastoralism in the Central Zagros Mountains." *Journal of World Prehistory* 17: 395–448.

Akkermans, Peter M. M. G., and Glenn M. Schwartz

2003 *The Archaeology of Syria: From Complex Hunter-Gatherers to Early Urban Societies (c. 16,000–300 B.C.)*. Cambridge: Cambridge University Press.

Algaze, Guillermo

1989 "The Uruk Expansion: Cross-Cultural Exchange in Early Mesopotamian Civilization." *Current Anthropology* 30: 571–608.

1993 *The Uruk World System: The Dynamics of Expansion of Early Mesopotamian Civilization*. Chicago: University of Chicago Press.

2007 "The Sumerian Takeoff." In *Settlement and Society: Essays Dedicated to Robert McCormick Adams*, edited by E. C. Stone, pp. 343–68. Los Angeles: Cotsen Institute of Archaeology; Chicago: The Oriental Institute.

Alizadeh, Abbas

2006 *The Origins of State Organizations in Prehistoric Highland Fars, Southern Iran: Excavations at Tall-e Bakun*. Oriental Institute Publications 128. Chicago: The Oriental Institute.

Asouti, A.

2006 "Beyond the Pre-Pottery Neolithic B Interaction Sphere." *Journal of World Prehistory* 20: 87–126.

Bahrani, Z.

2006 "Race and Ethnicity in Mesopotamian Antiquity." *World Archaeology* 38: 48–59.

Bar-Yosef, O., and A. Belfer-Cohen

1989 "The Levantine 'PPNB' Interaction Sphere." In *People and Culture in Change: Proceedings of the Second Symposium on Upper Palaeolithic, Mesolithic and Neolithic Populations of Europe and the Mediterranean Basin*, edited by I. Hershkovitz, pp. 59–72. Oxford: Archaeopress.

Berman, Judith C.

1994 "The Ceramic Evidence for Sociopolitical Organization in 'Ubaid Southwestern Iran." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 23–33. Monographs in World Archaeology 18. Madison: Prehistory Press.

Breniquet, Catherine

1987 "Nouvelle hypothèse sur la disparition de la culture de Halaf." In *Préhistoire de la Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du djebel Hamrin* (Colloque International du Centre National de la Recherche Scientifique, Paris 17–19 décembre 1984), edited by J.-L. Huot, pp. 231–42. Paris: Éditions du Centre National de la Recherche Scientifique.

oi.uchicago.edu

1989 "Les origines de la culture d'Obeid en Mésopotamie du nord." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 325–38. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

1996 *La disparition de la culture de Halaf: Les origines de la culture d'Obeid dans le nord de la Mésopotamie*. Bibliothèque de la Délégation archéologique française en Iraq 9. Paris: Éditions recherches sur les civilisations.

Bunimovitz, Shlomo, and Raphael Greenberg

2004 "Revealed in Their Cups: Syrian Drinking Customs in Intermediate Bronze Age Canaan." *Bulletin of the American Schools of Oriental Research* 334: 19–31.

Caldwell, Joseph R.

1964 "Interaction Spheres in Prehistory." In *Hopewellian Studies*, edited by J. R. Caldwell and R. L. Hall, pp. 133–43. Illinois State Museum Scientific Papers 12. Springfield: Illinois State Museum.

Campbell, Stuart

1999 "Archaeological Constructs and Past Reality on the Upper Euphrates." In *The Archaeology of the Upper Syrian Euphrates*, edited by G. del Olmo Lete and J.-L. Montero Fenollós, pp. 573–85. Barcelona: University of Barcelona.

2000 "The Burnt House at Arpachiyah: A Reexamination." *Bulletin of the American Schools of Oriental Research* 318: 1–40.

2007 "Rethinking Halaf Chronologies." *Paléorient* 33: 103–36.

Campbell, Stuart; Virginia T. Mathias; and Carl S. Phillips

2003 "The Prehistoric Pottery from Trenches V, VI and VII." In *Excavations at Arjoune, Syria*, edited by P. J. Parr, pp. 31–70. Biblical Archaeology Reports, International Series 1134. Oxford: Archaeopress.

Carter, Robert A.

2006 "Boat Remains and Maritime Trade in the Persian Gulf during 6th and 5th Millennia B.C." *Antiquity* 80: 52–63.

Carter, Robert A.; Harriet Crawford; S. Mellalieu; and D. Barrett

1999 "The Kuwait/British Archaeological Expedition to as-Sabiyah: Report on the First Season's Work." *Iraq* 61: 43–58.

Chapman, John

2000 *Fragmentation in Archaeology: People, Places and Broken Objects in the Prehistory of South Eastern Europe*. London: Routledge.

Childe, V. Gordon

1956 *Piecing Together the Past: The Interpretation of Archaeological Data*. London: Routledge & Kegan Paul.

Clarke, David L.

1978 *Analytical Archaeology*. 2nd edition, revised by Bob Chapman. New York: Columbia University Press.

Collard, M., and J. Tehrani

2005 "Phylogenesis versus Ethnogenesis in Turkmen Cultural Evolution." In *The Evolution of Cultural Diversity: A Phylogenetic Approach*, edited by R. Mace, C. Holden, and S. Shennan, pp. 109–29. London: University College London Press.

Crawford, Harriet

1978 "The Mechanics of the Obsidian Trade: A Suggestion." *Antiquity* 52: 129–32.

Cribb, Roger

1991 *Nomads in Archaeology*. New Studies in Archaeology. Cambridge: Cambridge University Press.

Dietler, Michael, and Brian Hayden, editors

2001 *Feasts: Archaeological and Ethnographic Perspectives on Food, Politics, and Power*. Smithsonian Series in Archaeological Inquiry. Washington, D.C.: Smithsonian Institution Press.

oi.uchicago.edu

Dobres, Marcia-Anne, and John E. Robb

2000 *Agency in Archaeology*. London: Routledge.

Flannery, Kent V.

1999 "Chiefdoms in the Early Near East: Why It's so Hard to Identify Them." In *The Iranian World: Essays on Iranian Art and Archaeology Presented to Ezat O. Negahban*, edited by A. Alizadeh, Y. Majidzadeh, and S. M. Shahmirzadi, pp. 44–58. Tehran: Iran University Press.

Forest, Jean-Daniel

1987 "La grande architecture obeidienne, sa forme et sa fonction." In *Préhistoire de la Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du djebel Hamrin* (Colloque International du Centre National de la Recherche Scientifique, Paris 17–19 décembre 1984), edited by J.-L. Huot, pp. 385–423. Paris: Éditions du Centre National de la Recherche Scientifique.

1989 "Les 'jetons' non Urukiens et l'échange des femmes." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 199–226. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

1996 "Éléments de chronologie." In *Oueili: Travaux de 1987 et 1989*, edited by J.-L. Huot, pp. 385–90. Paris: Éditions recherches sur les civilisations.

Frangipane, Marcella

1997 "A 4th-Millennium Temple/Palace Complex at Arslantepe-Malatya. North–South Relations and the Formation of Early State Societies in the Northern Regions of Greater Mesopotamia." *Paléorient* 23: 45–73.

2001 "Centralization Processes in Greater Mesopotamia: Uruk 'Expansion' at the Climax of Systemic Interactions among Areas of the Greater Mesopotamian Region." In *Uruk Mesopotamia and Its Neighbors: Cross-Cultural Interactions in the Era of State Formation*, edited by M. S. Rothman, pp. 307–47. Santa Fe: School of American Research Press.

2007 "Different Types of Egalitarian Societies and the Development of Inequality in Early Mesopotamia." *World Archaeology* 39: 151–76.

Gell, Alfred

1998 *Art and Agency: An Anthropological Theory*. Oxford: Clarendon Press.

Gibson, McGuire; Muhammad Maktash; Judith A. Frank; Amr al-Azm; John C. Sanders; Tony J. Wilkinson; Clemens Reichel; Jason A. Ur; Peggy Sanders; Abdulillah Salameh; Carrie Hritz; Brigitte Watkins; and Mahmoud Kattab

2002 "First Season of Syrian-American Investigations at Hamoukar, Hasekeh Province." *Iraq* 64: 45–68.

Giddens, Anthony

1984 *The Constitution of Society: Outline of the Theory of Structuration*. Berkeley: University of California Press.

Greenhill, S. J., and R. D. Gray

2005 "Testing Population Dispersal Hypotheses: Pacific Settlement, Phylogentic Trees and Austronesian Languages." In *The Evolution of Cultural Diversity: A Phylogenetic Approach*, edited by R. Mace, C. J. Holden, and S. Shennan, pp. 31–52. London: University College London Press.

Hall, Henry R., and C. Leonard Woolley

1927 *Al-'Ubaid*. Ur Excavations 1. Oxford: Oxford University Press.

Hayden, Brian

2001 "Fabulous Feasts: A Prologomenon to the Importance of Feasting." In *Feasts: Archaeological and Ethnographic Perspectives on Food, Politics, and Power*, edited by M. Dietler and B. Hayden, pp. 23–64. Smithsonian Series in Archaeological Inquiry. Washington, D.C.: Smithsonian Institution Press.

Helwing, Barbara

2003 "Feasts as a Social Dynamic in Prehistoric Western Asia: Three Case Studies from Syria and Anatolia." *Paléorient* 29/2, 63–86.

oi.uchicago.edu

Henrickson, Elizabeth F.

1989 "Ceramic Evidence for Cultural Interaction between the 'Ubaid Tradition and the Central Zagros Highlands, Western Iran." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 369–403. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Henrickson, Elizabeth F., and Ingolf Thuesen

1989a "Concluding Summary." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 457–59. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

1989b "Introduction: The Importance of the 'Ubaid; Transition between Revolutions." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 11–15. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Holden, Clare J., and Stephen Shennan

2005 "Introduction to Part I: How Tree-Like is Cultural Evolution?" In *The Evolution of Cultural Diversity: A Phylogenetic Approach*, edited by R. Mace, C. J. Holden, and S. Shennan, pp. 15–29. London: University College London Press.

Hodder, Ian

2006 *Çatalhöyük: The Leopard's Tale; Revealing the Mysteries of Turkey's Ancient "Town."* London: Thames & Hudson.

Insoll, Timothy

2006 *The Archaeology of Identities: A Reader*. London: Routledge.

Irving, A. C.

2001 A Contextual Study of Ceramic Evidence for Social Relations and Change during the Halaf-Ubaid Transition. Ph.D. dissertation, University of Manchester.

Jordan, P., and Stephen Shennan

2005 "Cultural Transmission in Indigenous California." In *The Evolution of Cultural Diversity: A Phylogenetic Approach*, edited by R. Mace, C. J. Holden, and S. Shennan, pp. 165–91. London: University College London Press.

Joyce, A.

2000 "The Founding of Monte Alban: Sacred Propositions and Social Practices." In *Agency in Archaeology*, edited by M.-A. Dobres and John E. Robb, pp. 71–91. London: Routledge.

King, R., and P. A. Underhill

2002 "Congruent Distribution of Neolithic Painted Pottery and Ceramic Figurines with Y-chromosome Lineages." *Antiquity* 76: 707–14.

Knapp, Arthur Bernard

2008 *Prehistoric and Protohistoric Cyprus: Identity, Insularity, and Connectivity*. Oxford: Oxford University Press.

Kohl, Philip L.

1989 "The Use and Abuse of World Systems Theory: The Case of the 'Pristine' West Asian State." In *Archaeological Thought in America*, edited by C. C. Lamberg-Karlovsky, pp. 218–40. Cambridge: Cambridge University Press.

Kozłowski, S. K., and Olivier Aurenche

2005 *Territories, Boundaries and Cultures in the Neolithic Near East*. British Archaeological Reports, International Series 1362. Oxford: Archaeopress.

Lamberg-Karlovsky, C. C.

1972 "Trade Mechanisms in Indus-Mesopotamian Interrelations." *Journal of the American Oriental Society* 92: 222–29.

oi.uchicago.edu

Lebeau, Marc

1987 "Aperçu de la céramique de la phase 'Oueili (Obeid 0)." In *Larsa (10e campagne, 1983) et 'Oueili (4e campagne, 1983): Rapport préliminaire*, Recherche sur les grandes civilisations, Mémoire 73, edited by J.-L. Huot, pp. 95–120. Paris: Éditions recherche sur les civilisations.

Lemonnier, Pierre, editor

2003 *Technological Choices: Transformation in Material Cultures since the Neolithic*. London: Routledge.

Lloyd, Seton

1978 *The Archaeology of Mesopotamia: From the Old Stone Age to the Persian Conquest*. London: Thames & Hudson.

Mace, Ruth; Clare J. Holden; and Stephen Shennan

2005 *The Evolution of Cultural Diversity: A Phylogenetic Approach*. London: University College London Press.

Masry, Abdulla Hassan

1974 *Prehistory in Northeastern Arabia: The Problem of Interregional Interaction*. Miami: Field Research Projects.

Matthews, Roger

2003 *The Archaeology of Mesopotamia: Theories and Approaches*. London: Routledge.

Mazzoni, S.

1994 "Drinking Vessels in Syria: Ebla and the Early Bronze Age." In *Drinking in Ancient Societies: History and Culture of Drinks in the Ancient Near East* (Papers of a Symposium Held in Rome, May 17–19, 1990), edited by L. Milano, pp. 245–76. History of the Ancient Near East, Studies 6. Padua: Sargon.

McCorriston, Joy

1997 "The Fiber Revolution: Textile Extensification, Alienation, and Social Stratification in Ancient Mesopotamia." *Current Anthropology* 38: 517–49.

Nissen, Hans J.

2001 "Cultural and Political Networks in the Ancient Near East during the Fourth and Third Millennia B.C." In *Uruk Mesopotamia and Its Neighbors: Cross-Cultural Interactions in the Era of State Formation*, edited by M. S. Rothman, pp. 149–79. Santa Fe: School of American Research Press.

Oates, Joan

1960 "Ur and Eridu, the Prehistory." *Iraq* 22: 32–50.

1976 "Prehistory in Northeastern Arabia." *Antiquity* 50: 20–31.

1987a "'Ubaid Chronology." In *Chronologies du Proche Orient / Chronologies in the Near East: Relative Chronologies and Absolute Chronology, 16,000–4,000 B.P.* (C.N.R.S. International Symposium, Lyon, France, 24–28 November 1986), edited by O. Aurenche, J. Evin, and F. Hours, pp. 473–82. British Archaeological Reports, International Series 379(ii). Oxford, British Archaeological Reports.

1987b "A Note on 'Ubaid and Mitanni Pottery from Tell Braq." *Iraq* 49: 193–98.

1993 "Trade and Power in the Fifth and Fourth Millennia B.C.: New Evidence from Northern Mesopotamia." *World Archaeology* 24: 403–22.

2004 "Ubaid Mesopotamia Revisited." In *From Handaxe to Khan: Essays Presented to Peder Mortensen on the Occasion of his 70th Birthday*, edited by K. von Folsach, H. Thrane, and I. Thuesen. Aarhus: Aarhus University Press.

Oates, Joan; Augusta McMahon; Philip Karsgaard; Salam al-Quntar; and Jason A. Ur

2007 "Early Mesopotamian Urbanism: A New View from the North." *Antiquity* 81: 585–600.

Oates, Joan, and David Oates

2004 "The Role of Exchange Relations in the Origins of Mesopotamian Civilization." In *Explaining Social Change: Studies in Honour of Colin Renfrew*, edited by J. F. Cherry, C. Scarre, and S. Shennan, pp. 177–92. McDonald Institute Monographs. Cambridge: McDonald Institute for Archaeological Research.

Pauketat, T.

2000 "The Tragedy of the Commoners." In *Agency in Archaeology*, edited by M.-A. Dobres and John E. Robb, pp. 113–29. London: Routledge.

oi.uchicago.edu

Philip, Graham; M. Abdulkarim; A. Beck; and P. G. Newson
2005 "Settlement and Landscape Development in the Homs Region, Syria: Report on Work Undertaken 2001–2003." *Levant* 37: 21–42.

Pollard, J.
2001 "The Aesthetics of Depositional Practice." *World Archaeology* 33: 315–33.

Pollock, Susan
1989 "Power Politics in the Susa A Period." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 281–92. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Potts, Daniel T.
1986 "A Contribution to the History of the Term Gamdat Nasr." In *Ğamdat Naṣr: Period or Regional Style?* (Papers Given at a Symposium Held in Tübingen, November 1983), edited by U. Finkbeiner and W. Röllig, pp. 17–32. Beihefte zum Tübinger Atlas des Vorderen Orients, Reihe B 62. Wiesbaden: Ludwig Reichert.

Price, T. D.; C. Knipper; G. Grupe; and V. Smrcka
2004 "Strontium Isotopes and Prehistoric Human Migration: The Bell Beaker Period in Central Europe." *European Journal of Archaeology* 7: 9–40.

Redman, Charles L.
1978 *The Rise of Civilization: From Early Farmers to Urban Society in the Ancient Near East*. San Francisco: W. H. Freeman.

Renfrew, Colin
1984 "Space, Time and Polity." In *Approaches to Social Archaeology*, edited by C. Renfrew, pp. 30–53. Edinburgh: Edinburgh University Press.

Roaf, Michael
1989 "Social Organization and Social Activities at Tell Madhhur." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 91–146. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.
1990 *Cultural Atlas of Mesopotamia and the Ancient Near East*. New York: Facts on File.

Robb, John E.
2007 *The Early Mediterranean Village: Agency, Material Culture, and Social Change in Neolithic Italy*. Cambridge: Cambridge University Press.

Rothman, Mitchell S.
2002 *Tepe Gawra: The Evolution of a Small, Prehistoric Centre in Northeastern Iraq*. University Museum Monographs 112. Philadelphia: University of Pennsylvania, Museum of Archaeology and Anthropology.
2004 "Studying the Development of Complex Society: Mesopotamia in the Late Fifth and Fourth Millennia B.C." *Journal of Archaeological Research* 12: 75–119.

Schaub, R. T.
1996 "Pots as Containers." In *Retrieving the Past: Essays on Archaeological Research and Methodology in Honor of Gus W. Van Beek*, edited by J. D. Seger, pp. 231–43. Winona Lake: Eisenbrauns.

Schortman, E. M.
1989 "Interregional Interaction in Prehistory: The Need for a New Perspective." *American Antiquity* 54: 52–65.

Shanks, Michael, and Christopher Tilley
1982 "Ideology, Symbolic Power and Ritual Communication: A Ritual Interpretation of Neolithic Mortuary Practices." In *Symbolic and Structural Archaeology*, edited by I. Hodder, pp. 129–54. New Directions in Archaeology. Cambridge: Cambridge University Press.

oi.uchicago.edu

Shennan, Stephen

1994 "Introduction: Archaeological Approaches to Cultural Identity." In *Archaeological Approaches to Cultural Identity*, edited by S. Shennan, pp. 1–32. 2nd edition. One World Archaeology 10. New York: Routledge.

2002 *Genes, Memes and Human History: Darwinian Archaeology and Cultural Evolution*. London: Thames & Hudson.

Stein, Gil J.

1994 "Economy, Ritual and Power in 'Ubaid Mesopotamia." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 35–46. Monographs in World Archaeology 18. Madison: Prehistory Press.

1998 "Heterogeneity, Power, and Political Economy: Some Current Research Issues in the Archaeology of Old World Complex Societies." *Journal of Archaeological Research* 6: 1–44.

1999 *Rethinking World-Systems: Diasporas, Colonies, and Interaction in Uruk Mesopotamia*. Tucson: University of Arizona Press.

2001 "Understanding Ancient State Societies in the Old World." In *Archaeology at the Millennium: A Sourcebook*, edited by G. M. Feinman and D. Price, pp. 353–79. New York: Kluwer Academic.

2002 "From Passive Periphery to Active Agents: Emerging Perspectives in the Archaeology of Interregional Interaction." *American Anthropologist* 104: 903–16.

Stein, Gil J., and M. J. Blackman

1993 "The Organizational Context of Specialised Craft Production in Early Mesopotamian States." *Research in Economic Anthropology* 14: 29–59.

Stein, Gil J., and Rana Özbal

2007 "A Tale of Two *oikumenai*: Variation in the Expansionary Dynamics of 'Ubaid and Uruk Mesopotamia." In *Settlement and Society: Essays Dedicated to Robert McCormick Adams*, edited by E. C. Stone, pp. 329–42. Ideas, Debates and Perspectives 3. Los Angeles: Cotsen Institute of Archaeology; Chicago: The Oriental Institute.

Stein, Gil J., and Mitchell S. Rothman

1994 *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*. Monographs in World Archaeology 18. Madison: Prehistory Press.

Thuesen, Ingolf

2000 "Ubaid Expansion in the Khabur. New Evidence from Tell Mashnaqa." In *La Djéziré et l'Euphrate Syriens de la protohistoire à la fin du II^e^ millénaire av. J.-C.: Tendances dans l'interprétation historique des données nouvelles*, edited by O. Roualt and M. Wäfler, pp. 71–79. Subartu 7. Turnhout: Brepols.

Trigger, Bruce

1968 "Major Concepts of Archaeology in Historical Perspective." *Man,* n.s., 3: 527–41.

Valladas, H.; J. Evin; and M. Arnold

1996 "Datation par la méthode carbone 14 des couches Obeid 0 et 1 de Tell el Oueili (Iraq)." In *Oueili: Travaux de 1987 et 1989*, edited by J.-L. Huot, pp. 380–83. Paris: Éditions recherches sur les civilisations.

Watts, D. J., and S. H. Strogatz

1998 "Collective Dynamics of 'Small-World' Networks." *Nature* 393: 440–42.

Wengrow, David

1998 "'The Changing Face of Clay': Continuity and Change in the Transition from Village to Urban Life in the Near East." *Antiquity* 72: 783–95.

2001 "The Evolution of Simplicity: Aesthetic Labour and Social Change in the Neolithic Near East." *World Archaeology* 33: 168–88.

Wilkinson, Tony J.

2000 "Regional Approaches to Mesopotamian Archaeology: The Contribution of Archaeological Surveys." *Journal of Archaeological Research* 8: 219–67.

Wilkinson, Tony J.; Belinda H. Monahan; and D. J. Tucker

1996 "Khanijdal East: A Small Ubaid Site in Northern Iraq." *Iraq* 58: 17–50.

oi.uchicago.edu

Wright, Henry T., and Gregory A. Johnson
1975 "Population, Exchange, and Early State Formation in South Western Iran." *American Anthropologist* 77: 267–89.

Yener, K. Aslıhan
2000 *The Domestication of Metals: The Rise of Complex Metal Industries in Anatolia*. Culture and History of the Ancient Near East 4. Leiden and Boston: Brill.

Yoffee, Norman
1993 "Mesopotamian Interaction Spheres." In *Early Stages in the Evolution of Mesopotamian Civilization: Soviet Excavations in Northern Iraq*, edited by N. Yoffee and J. J. Clark, pp. 257–69. Tucson: University of Arizona Press.
2005 *Myths of the Archaic State: Evolution of the Earliest Cities, States and Civilizations*. Cambridge: Cambridge University Press.

Zeitlin, R. N.
1994 "Accounting for the Prehistoric Long-Distance Movement of Goods with a Measure of Style." *World Archaeology* 26: 208–34.

oi.uchicago.edu

2

LOCAL IDENTITIES AND INTERACTION SPHERES: MODELING REGIONAL VARIATION IN THE UBAID HORIZON

GIL J. STEIN, *University of Chicago*

INTRODUCTION

Near Eastern archaeologists and researchers concerned with the study of complex societies recognize the importance of the Ubaid horizon for the subsequent development of the first urbanized state societies in Mesopotamia during the Uruk period (Henrickson and Thuesen 1989). Ironically, however, the recent history of Ubaid research has in many ways come to parallel research on the Uruk expansion. In both instances, modern political events have effectively prevented any new fieldwork in the southern Mesopotamian heartland. This has shifted the focus of research to neighboring areas — notably the Persian Gulf, north Syria, southeast Turkey, and Iran. This broadened geographical focus in Ubaid research compels us to reformulate many of our long-held views about this period and culture. We are confronted with a wide range of variability in assemblages that we can more or less group together as having some kind of Ubaid character. But what we do not understand is how or whether this material culture complex spread beyond southern Mesopotamia, how the different local groups who used these assemblages were organized, how the stylistically Ubaid assemblages in northern Mesopotamia and other regions differ from parallel assemblages in central and southern Mesopotamia, what social processes linked the different regions, and what these linkages mean in terms of the identities of the people who made and used those items. These questions are fundamentally important for any understanding of the development of complex societies in the ancient Near East.

In this essay I address three main topics. Firstly, I highlight some key aspects of regional variation across the broad extent of the social landscape defined by the Ubaid horizon style. I argue that the environmental, economic, and material differences provide compelling evidence for major variation in the organization of the local groups or polities that shared Ubaid material culture styles. As a result, we cannot hope to understand the Ubaid as a regional phenomenon without taking this variation or heterogeneity into account. Secondly, I suggest potentially productive areas for research to investigate this variation in socioeconomic organization and cultural processes within the Ubaid horizon. Finally, I argue for the utility of the interaction sphere as an interpretive framework that stresses the multiregional character of the Ubaid horizon, rather than a model of "expansion" drawn from the subsequent "Uruk expansion," with the latter's implications of hierarchical core-periphery structure.

DOMAINS OF VARIATION

The term "Ubaid" can have several meanings, as a chronological period, as an archaeological "culture," and as a material culture complex/assemblage with a specific spatio-temporal distribution. In this essay, I focus on the spatial distribution of material culture styles that are generally identified as Ubaid, and I refer to this as the "Ubaid horizon style," or as the "Ubaid horizon." The Ubaid material culture complex in southern Mesopotamia is best exemplified by the material from Eridu (Safar, Mustafa, and Lloyd 1981) and 'Oueili (e.g., Huot 1989 and 1996). It includes several distinctive characteristics: chocolate-brown painted greenish ware ceramics made on a tournette or slow wheel, baked clay "nails" or "mullers," baked clay sickles, "Ophidian" figurines with "coffee-bean" eyes, tripartite houses, and public architecture with niched-and-buttressed facades.

oi.uchicago.edu

However, when one moves beyond southern Mesopotamia, any attempt to understand the Ubaid as a broader-scale phenomenon must start from a recognition that this period and material culture complex was not a homogeneous entity, but instead consists of a relatively small set of stylistic forms and ideological structures that were shared to varying degrees by a diverse set of regions. The Ubaid horizon encompassed a vast expanse of the central Near East (fig. 2.1), from southeast Anatolia almost as far as the straits of Hormuz at the mouth of the Persian Gulf. Within this broad area, it is useful to distinguish at least eight different zones:

- the southern Mesopotamian Ubaid "heartland" centered on Ur, Eridu, 'Oueili, and Uruk;
- central Mesopotamia — known only from Tell Uqair and Ras al-Amiya;
- the Hamrin, best known from Tell Abada and Tell Madhhur;
- the north Mesopotamian and northeast Syrian Jazira, represented by sites such as Tell Arpachiyah, Tepe Gawra, and Yarim Tepe III;
- northwest Syria, including sites such as Kurdu, Hama, Mashnaqa, Tell al-'Abr, Kosak Shamali, and Tell Zeidan;
- southeast Anatolia, best known from Değirmentepe;
- western Iran, including the Susiana plain, represented by the Early, Middle, and Late Susiana periods, the Ubaid-related Susa I phase at Susa and Djaffarabad, and various phases of the Deh Luran sequence (see Weeks, Petrie, and Potts this volume); and
- the western littoral of the Persian Gulf, as exemplified by as-Sabiyah (site H3), as well as sites in Saudi Arabia such as Dosariyah, Abu Khamis, and Ain Qannas.

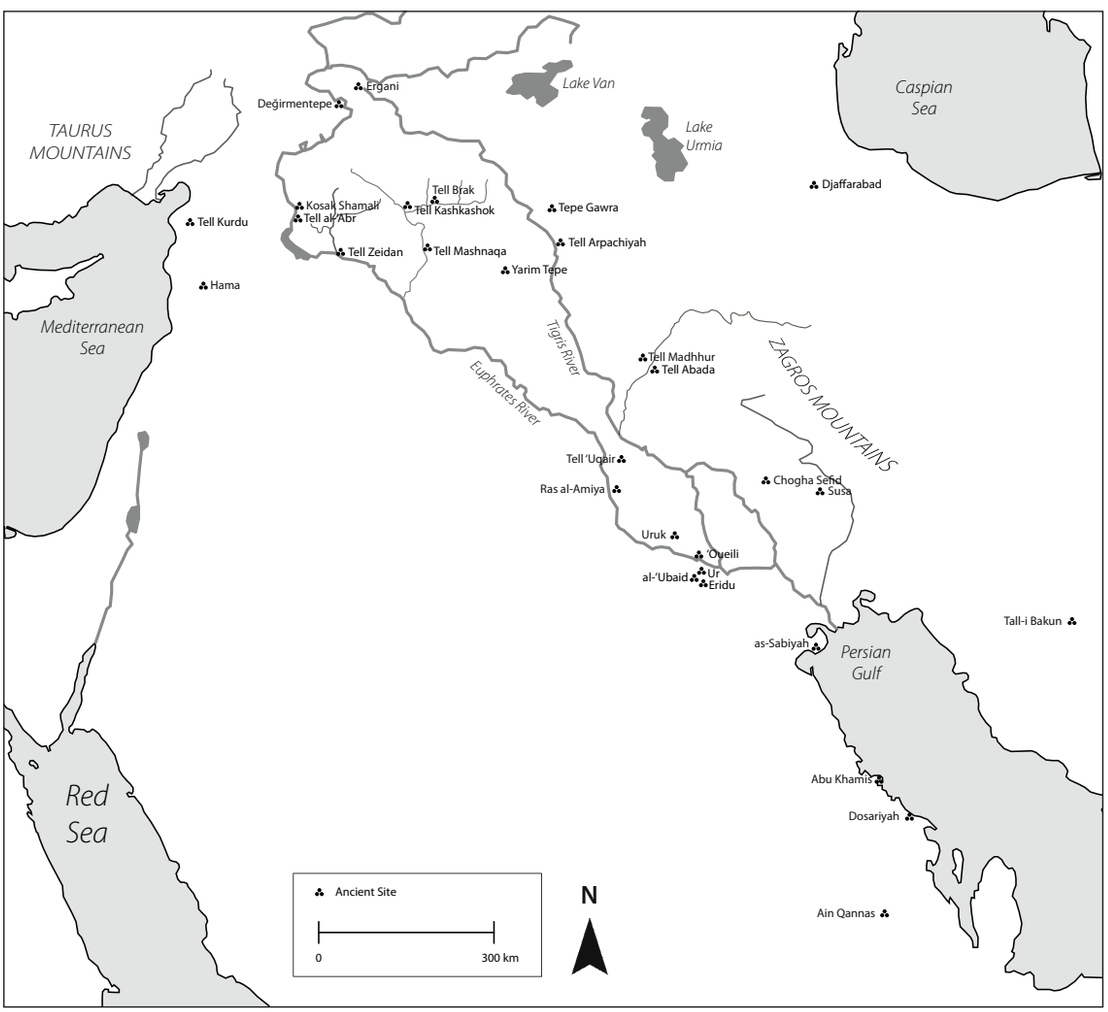


Figure 2.1. Map of main Ubaid regions and key sites

oi.uchicago.edu

Although linked by the use of certain forms of Ubaid material culture, each zone appears to have had its own distinctive local traditions and social identity. To understand this complex set of interacting regions, it is not enough to simply examine their shared Ubaid characteristics. The distinctively local character of each region is critically important to a broader understanding of this period. For this reason, it is also necessary to focus on the domains of variation that differentiated between localized regions within the Ubaid horizon. We can see this variation in social complexity, political organization, subsistence and craft economies, exchange activities, and ritual organization. By isolating these domains of variation, we can better understand how and why these diverse local entities chose to interact with one another through participation in a broader overarching framework within which they selectively appropriated and shared specific classes of Ubaid material culture and organizational forms. In short, the structure of diversity helps explain the structure of interaction. Several key domains of variation can be identified.

UBAID SOCIAL COMPLEXITY AND POLITICAL ORGANIZATION

The evidence for social complexity and political organization is patchy across the different regions that comprise the Ubaid horizon. As a result, most attempts at regional synthesis have ended up selecting and combining evidence from several different regions to form a composite picture: economic and household organization from the Hamrin (e.g., Jasim 1985 and 1989; Roaf 1989); public architecture from the Ur-Eridu core area (Safar, Mustafa, and Lloyd 1981); and settlement pattern data from the Susiana plain (Johnson 1973; Kouchoukos and Hole 2003; Wright and Johnson 1975). This is a risky thing to do, since it homogenizes variation between regions and can lead to the reconstruction of a societal type that may never have actually existed in the past.

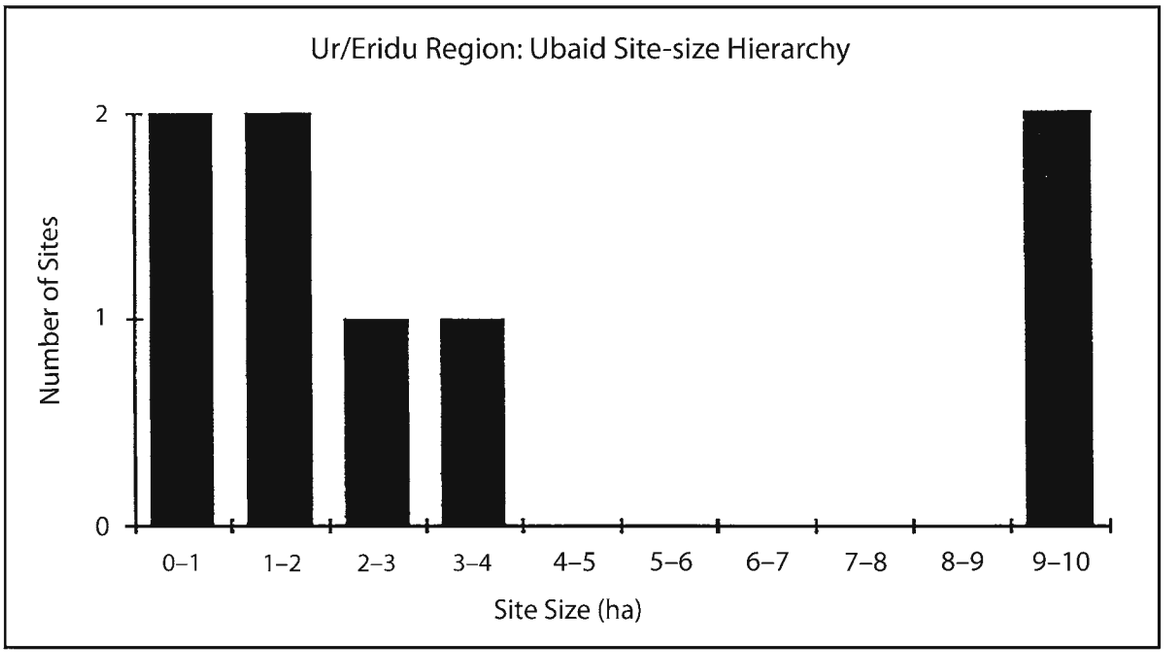
Some of our best evidence for Ubaid socioeconomic differentiation comes from the Hamrin region, where broad horizontal clearances at Tell Abada (fig. 2.7b), show that Building A, the largest house at the site, is four times the size of Building D, the smallest house (Jasim 1985: 202; Jasim 1989: fig. 2), and has a high concentration of what are apparently prestige goods (e.g., stone mace-heads and palettes) made from rare, imported raw materials (Jasim 1985: 202). Furthermore, this difference continues for all three building phases, suggesting that these differences in wealth were passed along from one generation to the next. Unfortunately, the only available data on households in the south derives from ‘Oueili and Eridu; these exposures are so limited that it is impossible to make the kinds of comparisons between houses that indicate in-site socioeconomic differences as at Abada in the Hamrin.

The Hamrin differs from the southern Ubaid area in having not only a significantly different environmental setting (with concomitant implications for economic variation), but also through the apparent absence of temples, even at sites such as Tell Abada, where over 80 percent of the settlement has been exposed. These contrasts are important because they suggest that the economic infrastructure and at least some aspects of community organization of the Hamrin and the Ur/Eridu regions might have differed in significant ways. Our attempts at synthesis generally assume that the same socioeconomic differentiation existed in both the Hamrin and the Ur/Eridu region, but the available evidence does not allow us to say for sure.

Although we must recognize the impact of significant differences in site preservation and archaeological visibility (Wilkinson 2000; Kouchoukos and Hole 2003), regional settlement organization nevertheless appears to vary across the Ubaid horizon in ways that have important implications for the political economy (fig. 2.2). Southern Mesopotamia and southwestern Iran both have two-tiered settlement systems, apparently reflecting a pattern of small centers, each controlling three or four neighboring villages (Johnson 1973; Wright 1981). However, when we add northern Mesopotamia into the comparison, we see higher site (and possibly population) densities (Wilkinson 2000: 244), significantly larger regional centers (Wilkinson and Tucker 1995: 40), and possibly a more differentiated Ubaid settlement hierarchy (Wilkinson 2003: fig. 4.3). By contrast, the Ubaid settlement systems of the Hamrin seems to have lacked larger-order (10–12 ha) centers.

When we consider the public ritual architecture associated with these Ubaid centers, we see further evidence for regional variation (fig. 2.3). Southern Mesopotamia has niched-and-buttressed long-room temple architecture, as seen at sites such as Eridu (Safar, Mustafa, and Lloyd 1981) and the Uruk area (Schmidt 1974). Temples with closely similar ground plan and architectural features are also present in northern Mesopotamia at Tepe Gawra (Tobler 1950, but see also Forest 1987 and Rothman 2002a: 73–75, for suggestions that these northern buildings had non-ritual functions). However, in lowland southwestern Iran, the evidence from the Susa Acropole in the Susa A period (end of the fifth millennium B.C.) suggests that public architecture in this area took the form of monumental brick platforms with an apparent temple on top, quite different in character and symbolic impact from the Ur/Eridu

oi.uchicago.edu



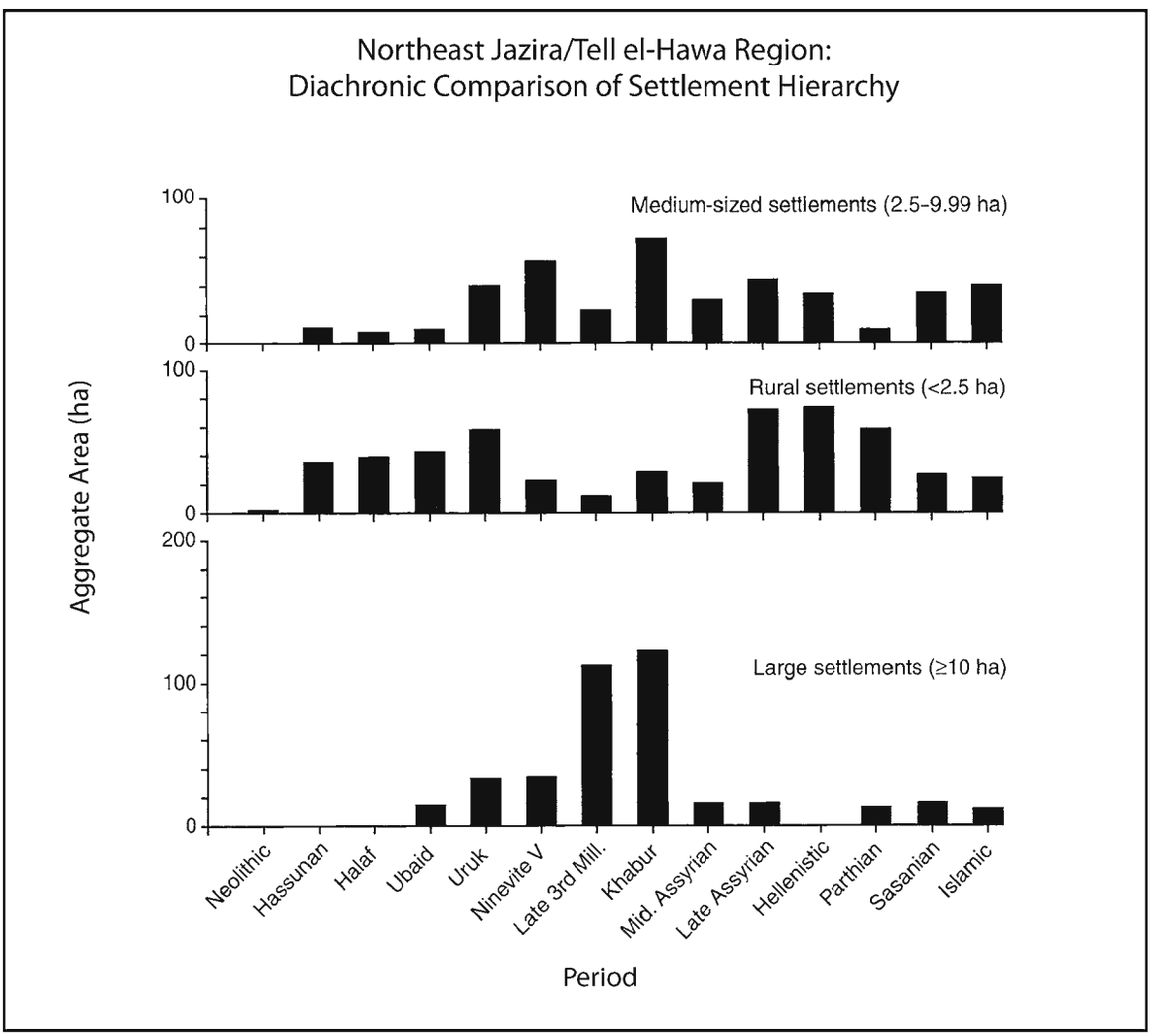


Figure 2.2. Comparison of settlement hierarchies in the Ur/Eridu region (after Wright 1981) and the Iraqi Jazira (after Wilkinson and Tucker 1993)

oi.uchicago.edu

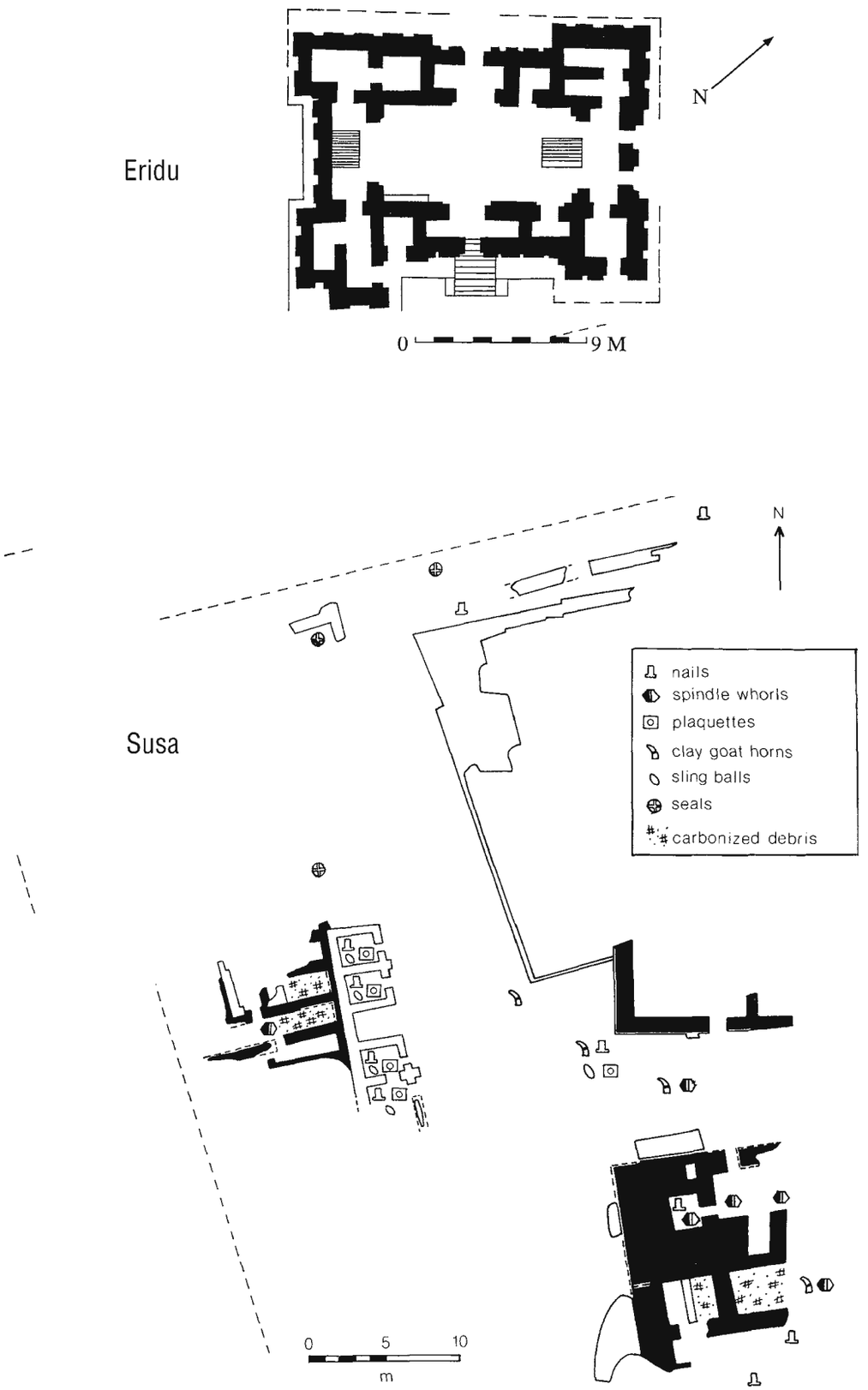


Figure 2.3. Eridu Temple VII (after Safar, Mustafa, and Lloyd 1984: fig. 39) and the monumental public building on the Susa Acropole platform (Pollack 1989: fig. 5)

oi.uchicago.edu

region (Canal 1978; Pollock 1989). These major contrasts in scale, style, organization, and public access to ritual architecture collectively imply significant inter-regional variation in these two contemporaneous, neighboring religious systems.

SUBSISTENCE

One of the key areas where we should expect to see significant regional variation is in the economic base of the Ubaid. This infrastructure includes subsistence production, crafts, and exchange. The clear differences in rainfall, hydrology, raw materials, and geomorphology lead us to expect significant differences, not only between northern and southern Mesopotamia, but also within the south itself. Northern Mesopotamia would have practiced rain-fed agriculture, whose cereal yields are half those of irrigation farming. As Harvey Weiss has pointed out for the third millennium B.C., dry farming systems can generate yields and surpluses comparable to irrigation only if twice as much land is cultivated (Weiss 1983). For the south, canal irrigation is inferred based on linear alignments of Ubaid sites, on site location outside the 250 mm annual rainfall isohyet, and on limited archaeobotanical evidence. But, as I note later, the role of irrigation in the south has become more problematical.

We currently have only limited published evidence for animal economies, but these too show marked regional variation that has important implications for the organization of small-scale polities across the Ubaid horizon. When we compare sites in wetter areas such as ‘Oueili and Eridu, and to a lesser extent Ras al-Amiya (Stronach 1961), we expect to see higher proportions of pig and cattle. Conversely, in drier areas such as Deh Luran, Khuzistan, the Hamrin, north Mesopotamia and north Syria, and southeast Turkey, we expect higher proportions of domesticated sheep and goat, supplemented by hunting of gazelle and onager.

At Tell el-‘Oueili, in the heart of the marshy region of the south, domesticated pigs comprise more than 56 percent of the identified fauna (Desse 1983; 1987; 1996). Similarly, cattle predominate at Ras al-Amiya (Flannery and Wright 1966). By contrast, sheep and goats predominate in the Ubaid-related Mehmeh-phase deposits at the drier site of Tepe Sabz on the Deh Luran plain (Flannery and Cornwall 1969). On the margins of the Khabur Basin in the dry-farming zone of north Syria, sheep/goat were generally the most important animals (e.g., at Kashkashok and Kosak Shamali), while wild species characteristic of the dry steppe, such as aurochs, onager, and gazelle, also played a major subsistence role at Kuran and Tell Mashnaqa (Gourichon and Helmer 2003: table 17.1; Zeder 1995: tables 2 and 3).

CRAFT PRODUCTION AND EXCHANGE

Craft economies also show regional variation. Although kiln technology (see, e.g., Jasim 1985: figs. 31–40; Moore 2002) and the use of the slow wheel/*tournette* were widespread (Nissen 1989), copper metallurgy seems to have begun in the north and only been embraced by communities in the southern alluvium toward the end of the fifth millennium. Copper smelting installations are common at Değirmentepe near the Ergani copper sources in southeast Anatolia (Moorey 1994: 256). Copper tools appear at Tepe Gawra as early as Ubaid stratum XVII and are clearly present in strata XIII and XII (Tobler 1950: 211–13). The late Ubaid occupation at Tell Arpachiyah also yielded at least one copper ax (Mallowan and Rose 1935: 104, pl. 11). By contrast, in the south, copper is absent from Eridu and ‘Oueili throughout the Ubaid sequence (Moorey 1994: 256).

The technology of stamp-seal use, whether as a marker of personal ownership or as part of an administrative record-keeping system, originated in the north and characterized both north Syria and the Taurus-Zagros arc in the fifth millennium (fig. 2.4). Stamp seals are common at northern Ubaid sites such as Değirmentepe (Esin 1994), Tepe Gawra in north Mesopotamia (Tobler 1950: 175), and in northwest Syria at sites such as Kosak Shamali. Stamp-seal record-keeping technology is also present in highland areas outside the Uruk horizon, for example, at Tall-i Bakun A in the Marv Dasht region of highland Iran (Alizadeh 1988; 1994) and in the Susa A or Susa I phase in Khuzistan (Amiet 1972; Hole 1983). However, stamp seals do not seem to have been used by Ubaid communities in either the Ur/Eridu region or in the Hamrin. Several studies have examined the ways that seals and sealings were used at specific fifth-millennium B.C. sites (e.g., Alizadeh 2006; Esin 1994; Rothman 2002a and 2002b). D. Caldwell (1976) uses glyptic evidence to examine long-distance trade between northern Ubaid sites and sites outside the Ubaid ho-

oi.uchicago.edu

rizon in Iran. However, researchers have yet to explore the ways in which these contrasts in both the presence and the functions of administrative technology may have related to differences between regions in economic and political organization within the Ubaid horizon.

Finally, there is evidence for local and long-distance exchange throughout the Ubaid area, although the trade goods varied from place to place. Neutron activation analyses of ceramics from the Ubaid sites on the Persian Gulf (Oates et al. 1977) and from sites in the Jazira (Davidson and McKerrell 1980; Rothman and Blackman 2003) show evidence for both long-distance and local exchange. Bitumen from both Hit (near Babylon) and northern Iraq seems to have been traded as far northwest as Kosak Shamali on the Euphrates (Connan and Nishiaki 2003: 302–03), while another, as yet unidentified, source supplied 'Oueili in the south (Huot 1989: 38). Eastern Anatolian obsidian was also traded in varying quantities from north to south (Breniquet 1989: 327). Small amounts of imported semi-precious stones such as lapis lazuli, turquoise, and carnelian are known from Ubaid strata at Tepe Gawra (Tobler 1950: 192). The stone for the celts, mace-heads, and palettes found at Gawra, Yarim Tepe III, the Ubaid sites in the Hamrin, and those in the south were also probably imported (most, presumably, from highland Iran). The volume of trade in exotic stones seems to have reached a peak in the late Ubaid (Gawra stratum XIII; Tobler 1950: 192, 202). Although, as noted above, copper artifacts rarely occur in Ubaid sites in southern Mesopotamia proper, significant amounts of this exotic metal do seem to have been traded over long distances to supply the elites who were buried in the Susa necropole in the Susa I/terminal Ubaid period (Moorey 1994: 256).

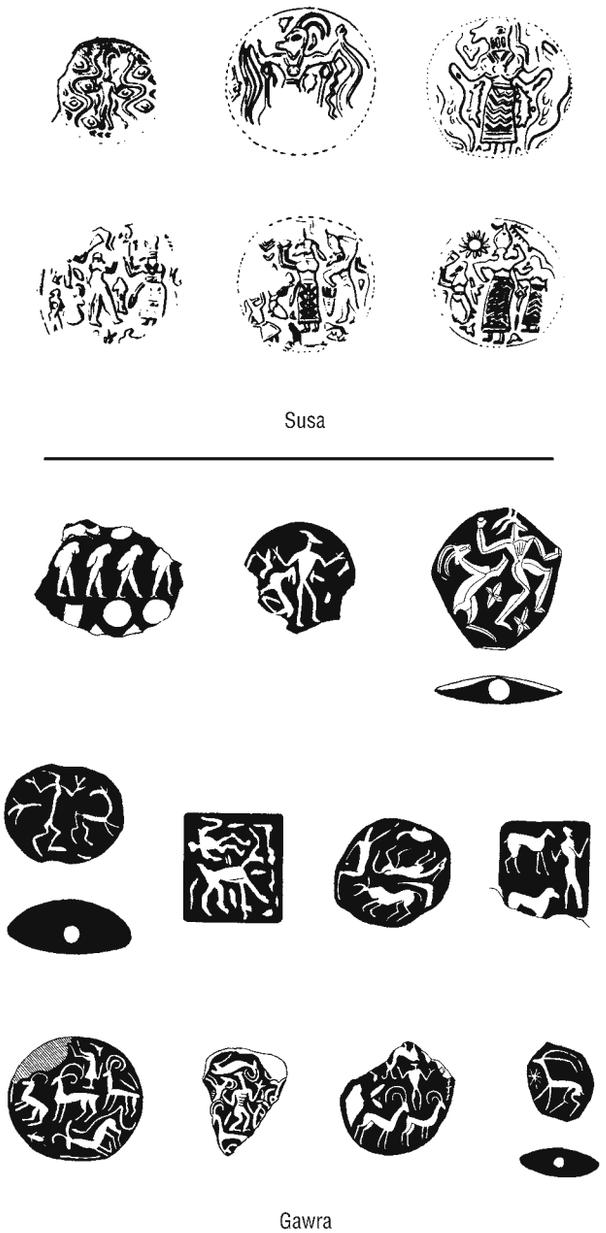


Figure 2.4. Stamp-seal impressions from Susa (after Hole 1983: fig. 2) and Tepe Gawra (after Tobler 1950: pl. 164)

Although fragmentary, the available evidence indicates the existence of a complex web of inter-regional exchange whose individual strands crisscrossed and linked the various regions in the Ubaid horizon. This network apparently facilitated the movement of a variety of utilitarian and prestige goods. However, at this point we still have not yet been able to assess the volume of this trade, the cultural significance of the goods traded, or the actual organization of the exchange network. It is equally important to emphasize that we still need to understand the linkages that facilitated the creation and maintenance of these trade connections. For example, we know from ethnographic and ethnohistoric studies of the Calumet ceremony in native North America (see, e.g., Hall 1997: 48–58) and the Kula Ring in Melanesia (e.g., Malinowski 1950; Uberoi 1962) that the production of shared identities and ideological connections played a crucial role in the dynamics of inter-regional interaction in middle-range or incipient complex societies. It is highly probable that a similar linkage between ideologies of identity and long-distance trade networks also characterized the Ubaid horizon. One important area for future research is contextual analysis of exchange as both an economic and a cultural process linking the different parts of the Ubaid horizon.

Overall, regional variation in settlement organization, social hierarchy, economic differentiation between households, agriculture, animal economies, craft production, exchange, and public institutions (as reflected in ritual architecture) all add up to define major differences in the political economies of the different groups and regions that comprised the Ubaid horizon. Clearly, the Ubaid horizon cannot be treated as a homogeneous entity. Instead,

oi.uchicago.edu

we must consider each local region as a small-scale society in its own right. At the same time, localized variation in resources and local cost structures would have created differentials in local demand that were ideal pre-conditions for the development of large-scale exchange networks to link these diverse areas. Permeating this structure of variation and interconnections we can hypothesize and seek evidence for shared ideologies of religion, community, and social identity that would have cross-cut the constituent local groups to link polities across the expanse of the Ubaid horizon.

ASPECTS OF SOCIAL PROCESS IN THE UBAID HORIZON

This brief sketch of some domains of regional variation in the Ubaid horizon highlights some key areas of social process where we can usefully focus our research.

UBAID SOCIAL IDENTITY

At the most basic level, we need to ask explicitly, "What is 'Ubaid' as a form of social identity?" As defined by psychologists Henri Tajfel and John Turner, social identity is composed of three elements: (a) categorization: how we place ourselves and others into categories; (b) identification: how we associate ourselves and others with certain groups; and (c) comparison: how we compare our groups with different groups, in such a way that we favor our own group (see, e.g., Tajfel 1982). In social identity theory, instead of having only one "personal self," an individual has several definitions of self that correspond to widening spheres of group membership. In different social contexts an individual may think, feel, and act on the basis of his personal, familial, or national level of self definition (Tajfel and Turner 1986; Turner 1982).

This conceptualization of social identity provides an extremely useful way to approach the similarities between Greater Mesopotamian regions and more importantly, the spread of Ubaid styles of material culture from south to north in the fifth millennium B.C. What statements about social identity were being made by the people at northern sites such as Tepe Gawra who chose to give up using Halaf house forms and ceramics in order to use Ubaid forms instead? Virtually all researchers recognize that the most widespread marker of Ubaid identity is the highly visible category of ceramics. This distinctive ceramic style would have signalled membership of a group sharing identity through the medium of some kind of kinship, social, or religious ideology (Berman 1994: 29; Matthews 2003: 103; Thuesen 1992: 16). During the fifth millennium, burial practices show a major shift to the interment of adults with standardized grave goods in community cemeteries across a large number of regions such as northwest Syria, the Jazira, the Hamrin, and the Susiana Plain; this takes place concurrently with the spread of Ubaid material culture styles. Hole suggests that these changes in funerary practices indicate the development of a new and different conception of community and of individual identity within that community, concluding: "this implies that there was a strongly held and widely shared set of beliefs and practices throughout the Ubaid world and even beyond it" (1989: 176). The ceramic and mortuary evidence points to significant changes in social identity. However, we may also be able to see evidence for the emergence of some form of Ubaid personal identity as well. Some of the strongest assertions of identity are those worn or inscribed on the body itself through media such as personal ornaments (Stein and Özbal 2007), head shaping (Daems and Croucher 2007; see also papers by Croucher, Daems and Lorentz this volume), or tattoos. One such marker of Ubaid identity may have been the use of nail-shaped labrets/lip plugs and ornaments that may have been ear spools (fig. 2.5). Labrets and small ear spools are present at most excavated Ubaid sites from north Mesopotamia down to the Persian Gulf at sites such as 'Oueili, al-Ubaid, Tell Abada, Tepe Gawra, Ras al-Amiya (Stronach 1961: pl. 43:8–12), Choga Sefid, and as-Sabiyah (site H3) (Carter 2002). They are rare or absent at most Halaf sites, and only appear at the latter locations in Ubaid levels (e.g., at Gawra). The widespread distribution of labrets and ear spools across these diverse regions within the Ubaid horizon, combined with their appearance in tandem with the spread of other Ubaid styles in the later fifth millennium, may indicate that these were significant and easily recognized markers of Ubaid personal identity.

However, although some markers of an overarching Ubaid identity are widespread, other classes of material culture retain a strongly localized character. One such marker may be the use of the reptilian headed "Ophidian" terra-cotta figurines — found so far only in the far south alluvium at Ur, Eridu, Uruk, and 'Oueili (Breniquet 2001).

oi.uchicago.edu

They do not occur in the Hamrin, or in the Ubaid levels at Tepe Gawra and other north Mesopotamian sites, which continue the earlier Halaf tradition of painted female figurines (Breniquet 1989: 335). It would therefore seem that whatever a multi-regional Ubaid identity might have been, it was expressed selectively in specific social domains, while local identities were also maintained and asserted in other spheres, perhaps domestic or ritual contexts.

The available evidence suggests that some form of pan-regional Ubaid identity did emerge in the fifth millennium. We do not know the basis of this Ubaid identity, or even if it was expressed in the same way, with the same cultural meanings, in the different regions that comprised the Ubaid horizon. At the same time, it is clear that local identities persisted as well in these same regions. Disentangling the content, context, and expressions of these co-existing identities is crucial for understanding the social, economic, religious, or kinship ideologies that linked the Ubaid horizon into a recognizable super-regional entity.

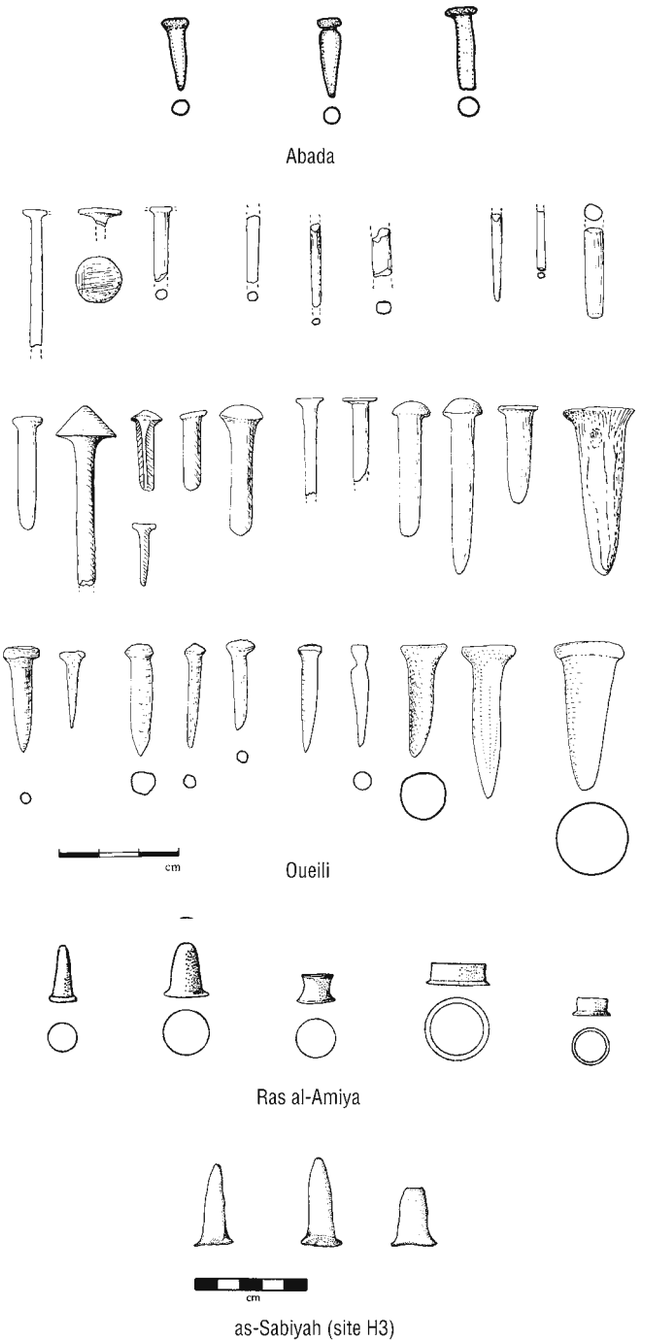


Figure 2.5. Labrets and ear-spools(?) from Tell Abada (Jasim 1985: fig. 64), Tell el-'Oueili (Huot 1996: 303), Ras al-Amiya (Stronach 1961: pl. 43), and as-Sabiyah (site H3) (Carter and Crawford 2002: fig. 9)

ENVIRONMENT

In addition to problems of ideology and identity, a second set of questions that require our attention are those relating to the environment of southern Mesopotamia and its implications for the political economy of complexity. Over the last decade our understanding of the ancient environment of sixth–fifth millennium southern Mesopotamia has undergone a dramatic shift. Hole (1994), Kouchoukos (1998), Pournelle (2003), and others draw on both recent palaeo-environmental studies and remote sensing of ancient landforms to suggest that the Indian Ocean monsoon system formerly played a much greater role in structuring seasonal rainfall patterns and the creation of widespread wetland conditions in the southern alluvium. Pournelle's (2003) reconstruction of fifth-millennium landscapes from satellite imagery suggests that wetland conditions predominated to such an extent in the Ur/Eridu region that settlements were restricted to long linear "turtleback" formations surrounded by marsh and water. If this reconstruction is correct, then it calls into question the role of irrigation as the predominant Ubaid subsistence technology and reminds us that we must also recognize the importance of wetland subsistence resources — at least in the southernmost alluvium. However, the recovery of carbonized cereal remains, flax seed, and an 80 sq. m granary at 'Oueili (Huot 1989: 26) clearly indicates that irrigated cereals did play a significant role in the early economy of this region. Conditions apparently became drier moving north, so that sites such as Uqair were much more likely to have been more dependent on an irrigation economy, corresponding to the traditional view. It therefore seems that Ubaid southern Mesopotamia had a diversity of environments in which the predominant economic strategy and the precise mix of exploited subsistence resources varied significantly across the landscape.

oi.uchicago.edu

The revised environmental understanding of the sixth–fifth-millennium B.C. Ubaid heartland forces us to re-examine critically the question of whether the southern part of this region would have had sufficient amounts of arable land available to generate systematic large-scale food surpluses though irrigation agriculture. In an earlier paper, I suggested that Ubaid chiefdoms in the south were based on a staple-finance system that used control of ritual to mobilize the cereal surpluses generated by irrigation agriculture (Stein 1994). This now seems to have been an oversimplification of a far more variable situation. In an environment where the problem may have been too much rather than too little water, the rules of the game would have been fundamentally different. One might expect that arable land on the long, narrow "turtlebacks" was an extremely scarce and therefore highly valuable resource in the southernmost areas, while water and labor were the more valued productive resources in more northerly areas of the alluvium. We need to systematically re-examine the relationship between environmental parameters, economic structures, and sociopolitical organization in this region.

Political Organization and Socioeconomic Complexity

A third important area where we can productively focus our research is the realm of Ubaid political organization and socioeconomic complexity. As noted earlier, we cannot assume that political structure was the same throughout the Ubaid interaction sphere. Groups may have been organized as chiefdoms in some areas such as Susiana (Wright 1984) and southern Mesopotamia, while other areas may have been less formally hierarchical in political organization.

It is clear that Ubaid polities in southern Mesopotamia do not correspond to the traditional Polynesian and southeastern United States model of chiefdoms (Yoffee 2005). Ubaid chiefdoms might function more on the lines of what Colin Renrew had called "group oriented" chiefdoms (Renfrew 1974). These polities would have conformed to a corporate mode of organizing political control in Blanton and Feinman's "dual-processual" model (Blanton et al. 1996; Feinman 1995). The corporate character of these incipient complex societies is worth noting in the light of Kent Flannery's suggestion that chiefdoms in the Near East are hard to detect archaeologically because chiefs based their power on coalition building, sacred knowledge, and the use of their economic advantages to reward followers, rather than on ostentation and hypertrophic display (Flannery 1999). It would be useful to compare the different regions of the Ubaid horizon in terms of these models, since political leadership may well have been attained and exercised through different strategies.

Domestic architecture in the Hamrin shows evidence for hereditary economic differentiation but no strong elite formation. Although community-level institutions such as temples are known, at least from Tepe Gawra, they do not seem to have played an active role in the mobilization of agricultural surpluses in the north. In the Ur/Eridu region of southern Mesopotamia, we have no evidence for strong elite formation, or at least no emphasis of ranking in the available material culture record from cemeteries (Wright and Pollock 1987). As in the north, corporate leadership strategies seem to have predominated. However, community-level temples may have been linked to the ritual-based mobilization of surpluses generated by irrigation agriculture. At the end of the Ubaid, the Susa A or Susa I period (end of the fifth millennium) on the Susiana plain shows clear signs of elite formation in the highly visible prestige goods of exotic raw materials such as copper and luxury ceramics. These suggest that (at least in these particular areas) leadership was shifting to a focus on network strategies, rather than on inclusive corporate ideologies, as had apparently been the case in the Ur/Eridu region. At the same time, public ritual architecture seems to have been oriented toward buildings on monumental platforms (Canal 1978) rather than the smaller-scale and more restricted access niched-and-buttressed tripartite temples of the Ur/Eridu Ubaid heartland.

The Spread and Decline of the "Northern Ubaid" Horizon

Following from questions concerning Ubaid social systems and markers of identity are questions relating to their spread. How and why did the Ubaid horizon style replace the Halaf horizon in the north? Specifically, what are the roles of exchange and colonization in the spread of Ubaid material culture and ideologies into north Syria, southeast Anatolia, and north Mesopotamia? Although much attention has been paid to the initial spread of Ubaid styles into the north and other areas, the second half of this process has not really been examined in any synthetic way.

oi.uchicago.edu

This is a major omission, because the divergence and disappearance of the Ubaid horizon in north Mesopotamia, north Syria, and southeast Anatolia can shed considerable light on its beginnings. The Ubaid horizon style appears gradually in the north (Stein and Özbal 2007), and also disappears gradually, with the reassertion of localized material culture stylistic groups. In north Syria, Ingolf Thuesen has documented a clear trend toward decreasing amounts of Ubaid painted pottery over the course of the Ubaid 3 and 4 at Tell Hama and Tell Kurdu (Thuesen 1989). Local ceramic styles either emerge or resurface, as seen in the chaff-tempered, handmade wares of the Coba bowl tradition. The sprig ware and impressed ware known from Gawra and other Jazira sites would also fall into this category. At Gawra, Ubaid styles of architecture disappear, both the temples and the tripartite houses. By the end of the fifth millennium, virtually nothing is left of Ubaid material culture styles in the north, and regionally localized styles re-emerged as the most visible forms of material culture. It is important to emphasize that local styles were always present in these areas, even during the maximal extent of Ubaid influences. Much of the difficulty in understanding the fading of Ubaid styles is due to the unfortunate fact that archaeological reporting of fifth-millennium sites has consistently over-emphasized the Ubaid component of each site assemblage, while under-reporting the local components, despite the latter's predominance in the excavated materials. More complete, representative publication of the materials from fifth-millennium sites will be extremely important for any understanding of how and why the Ubaid horizon seems to have ended.

LINKAGES ACROSS THE UBAID HORIZON

Despite these important differences between the local cultures, these regions nevertheless shared key aspects of material culture and ideology that linked them into a more or less definable horizon. However, the Ubaid pottery style is the only form of material culture that was shared across the entire Ubaid horizon. Other distinctively Ubaid forms of material culture, such as baked clay "mullers," labrets, tripartite houses, niched facade temples, stone mace-heads, and palettes are distributed more unevenly. Similarly, aspects of Ubaid social practice such as the use of community cemeteries with standardized grave goods are widely, but not universally, distributed across the Ubaid horizon. Virtually every region has more than one Ubaid style of artifact class or social practice, but the shared forms differ from region to region, and are even inconsistent within each region. This pattern (or more accurately, lack of patterning) has important implications for our understanding of the organization and dynamics of inter-regional interaction in the Ubaid horizon.

The most widely shared items of Ubaid material culture are those connected with daily practice, rather than elite status. Berman (1994: 24) makes the important point that Ubaid ceramics are paradoxically both stylistically homogeneous across the Ubaid horizon while also being locally produced. The presence of kilns throughout the Ubaid horizon and chemical compositional data together confirm that ceramics were locally produced and exchanged. Under such circumstances, stylistic homogeneity across such a vast area could only have been maintained through frequent interaction between regions. Given their widespread distribution, Ubaid styles of ceramics do not seem to have functioned as a prestige good in most cases, the exceptions being the elaborate Ubaid-related ceramic vessels from the Susa Necropole (Berman 1994; Hole 1983), and the imported southern Mesopotamian Ubaid pottery found at coastal and a few inland sites along the western shore of the Persian Gulf (Carter 2006; Matthews 2001). Instead of being considered a luxury or prestige item, "when viewed from the perspective of other broadly distributed Ubaid features…, pottery may be seen as yet another marker of membership in a group that shares an ideology. In this case … Ubaid pottery style would have been more noticeable by its absence in a household than by its presence" (Berman 1994: 29).

PROCESSES OF INTERACTION IN THE SPREAD OF UBAID MATERIAL CULTURE

The spread of Ubaid assemblages has been seen as originating from a single identifiable south Mesopotamian source to the northern peripheries and replacing the preceding local Halaf culture. Some researchers, such as Catherine Breniquet, argue that Ubaid styles gradually supplanted Halaf styles as the result of long-term exchange relations between southern and northern Mesopotamia (Breniquet 1987; 1989). Other scholars, such as Joan and David Oates and Ufuk Esin, have suggested that the Ubaid and Uruk horizon styles reflect the operation of the

oi.uchicago.edu

same underlying dynamic of migration, colonization, and domination (Esin 1989; Oates and Oates 2004). These researchers have suggested that key northern Ubaid sites were in fact southern Mesopotamian colonies, established for the asymmetrical exchange of raw materials and most probably inhabited by an immigrant southern population who maintained close ties with the parent societies of lowland Mesopotamia. An alternative interpretation sees the "northern Ubaid" as reflecting the gradual, peaceful spread of an Ubaid ideology into north Syria, southeast Anatolia, and northern Mesopotamia (Stein 1994: 44), perhaps as an outgrowth of long-standing inter-regional contacts (Breniquet 1989).

When we examine the social contexts of artifact use in the Ubaid horizon, we can see great regional variation in both the processes of inter-regional interaction and their material correlates. At the actual boundary between lower and upper Mesopotamia in the Syrian steppe, we may well have limited evidence suggestive of migration at the site of Tell Mashnaqa (Thuesen 2000). It is also possible that southern migrants were present at Tell Brak as well, since this site functioned in later periods as a "gateway community" — what we might call the northernmost outpost of southern Mesopotamia. However, detailed contextual analyses at the intra-site level suggest that in almost all other cases Ubaid material culture spread to the north peacefully through some combination of trade and the local appropriation of Ubaid social identity and ceremonial ideology, rather than actual colonization. As Breniquet (1989) has shown, the northern Ubaid sites show many significant continuities with the pre-existing Halafian culture, such as the widespread use of seals and sealings, smaller nuclear-family sized houses, the continuing use of Halaf-style figurines, and the persistence of tholoi in Ubaid levels. These differences clearly show the existence of northern groups having distinctly local identities at the same time as they functioned within the broader framework of the Ubaid horizon.

LOCAL IDENTITIES WITHIN THE UBAID HORIZON: TEPE GAWRA AND DEĞIRMENTEPE

A close examination of Ubaid levels at Tepe Gawra in the Jazira and Değirmentepe in southeast Anatolia shows two important aspects of the relationship between local and super-regional identities within the Ubaid horizon. First, Ubaid styles of material culture appear to have spread gradually and were selectively appropriated by northern communities. Second, those elements of Ubaid architecture and other classes of material culture that spread to the north were transformed and used in everyday practice in ways that were fundamentally different from superficially similar sites with Ubaid material culture in southern Mesopotamia. The comparison presented here summarizes a more detailed discussion presented by Stein and Özbal (2007).

Tepe Gawra's stratigraphic sequence documents a gradual transition from the Halaf stratum XX to the later Ubaid occupation (Tobler 1950; Breniquet 1989). In strata XIX to XIII (stratum XII remains problematic in terms of its chronology and stylistic affiliations), Ubaid styles of material culture increase, while Halaf artifacts become progressively scarcer and eventually disappear. The people of Gawra adopted Ubaid material culture incrementally and selectively, appropriating some items far earlier than others. This is especially clear when we focus on the ways that material culture can express distinction between the public and the personal components of identity. Public identity can be defined as the perception of self in relation to the larger community. This would be expressed in material culture used in highly visible social domains such as ceramics, architecture, ritual paraphernalia, or badges of rank, accessible to many people at an intermediate social distance. By contrast, personal identity is the definition of self in more circumscribed social spheres, most notably in the domestic context. One would expect personal identity to be materialized in small personal ornaments that would be most visible and information-rich in contexts involving minimal social and physical distance such as face-to-face interaction in the household.

At Tepe Gawra, the first markers of Halaf identity to be replaced were ceramics and house form, both reflecting community membership as an aspect of public identity (fig. 2.6). Similarly, larger, highly visible Ubaid prestige goods or badges of rank, such as polished stone mace-heads, also appeared at a relatively early date in level XVIII. By contrast, however, it is significant that the longest-lived Halaf artifact types were small-sized markers of personal identity: seals, sew-on ornamental studs, and tanged pendants, items that were most visible in face-to-face interaction. Polished stone labrets, which I suggest may be widespread markers of Ubaid personal identity, appeared gradually from level XVI to XII (Tobler 1950: 226, pl. 112:11–13). At Gawra, the available evidence suggests that markers of Halaf personal identity declined while markers of Ubaid personal identity increased in frequency. Overall, the public and personal aspects of cultural identity at Gawra seem to have changed at different rates. People quickly took on markers of Ubaid identity in the public domain, especially in contexts relating to community affilia-

oi.uchicago.edu

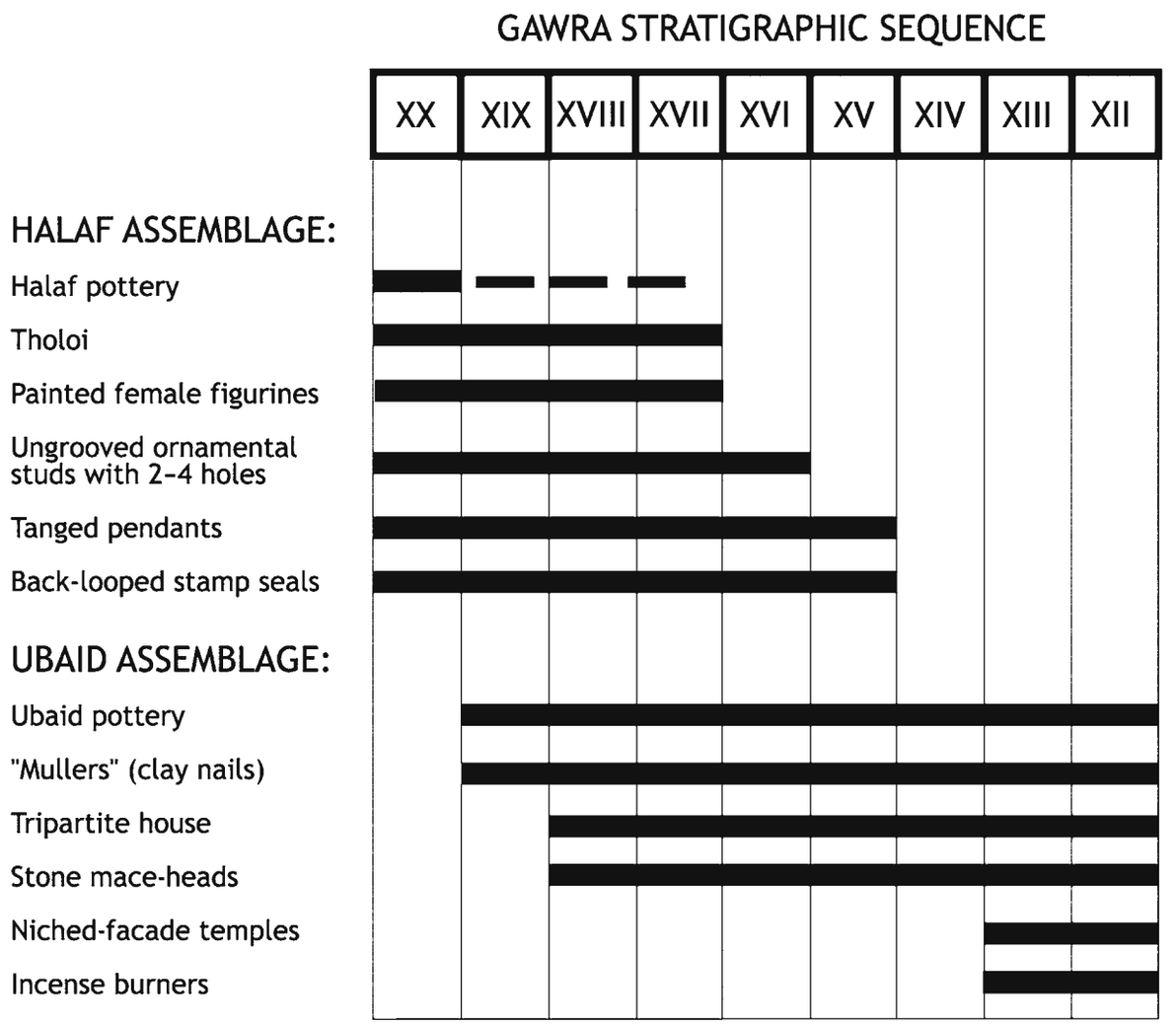


Figure 2.6. Halaf to Ubaid transition at Tepe Gawra in the fifth millennium B.C. (after Stein and Özbal 2007: fig. 94)

tion and hierarchical social status. However, at the same time, the inhabitants of Gawra retained a distinctively Halaf personal identity for a much longer time, expressed mainly in the personal or domestic sphere.

The 2.5 ha site of Değirmentepe in the Upper Euphrates valley of eastern Turkey exemplifies the ways that Ubaid material culture was translated into pre-existing cultural systems of the different local regions in the Ubaid horizon (Esin 1989). Değirmentepe level 7 yielded Ubaid pottery and at least eight Ubaid-style tripartite houses. Although the individual house plans closely resemble those known from sites such as Tell Madhhur and Abada in the Hamrin, the use of space in the Değirmentepe houses, and their relationship to one another, show major differences in both community organization and in the uses of domestic space.

In southern Mesopotamia, Ubaid domestic and ritual spaces were clearly distinct so that we can easily differentiate temples and domestic residences (Roaf 1984). However, Değirmentepe lacks the clear separation between ritual and domestic space that is so characteristic of the Ubaid in the Ur/Eridu region. Instead, at Değirmentepe, nearly all the central court areas of the tripartite structures, although clearly domestic, yield evidence for household-level ritual activities as well. In this way, the site continues a deep local Anatolian tradition dating back as far as the Ceramic Neolithic.

Değirmentepe also shows a remarkable transformation of Ubaid-style tripartite architecture in terms of the ways that individual households were integrated at the level of the community (fig. 2.7a). In southern Mesopotamia (e.g., at ʻOueili and Eridu) and in the Hamrin, Ubaid tripartite houses were free-standing. By contrast, at Değirmentepe, the tripartite houses are contiguous, with shared walls between structures, in an agglutinative pattern of community organization. This reflects a basic difference in the local meanings of public and domestic space. Agglutinated

oi.uchicago.edu

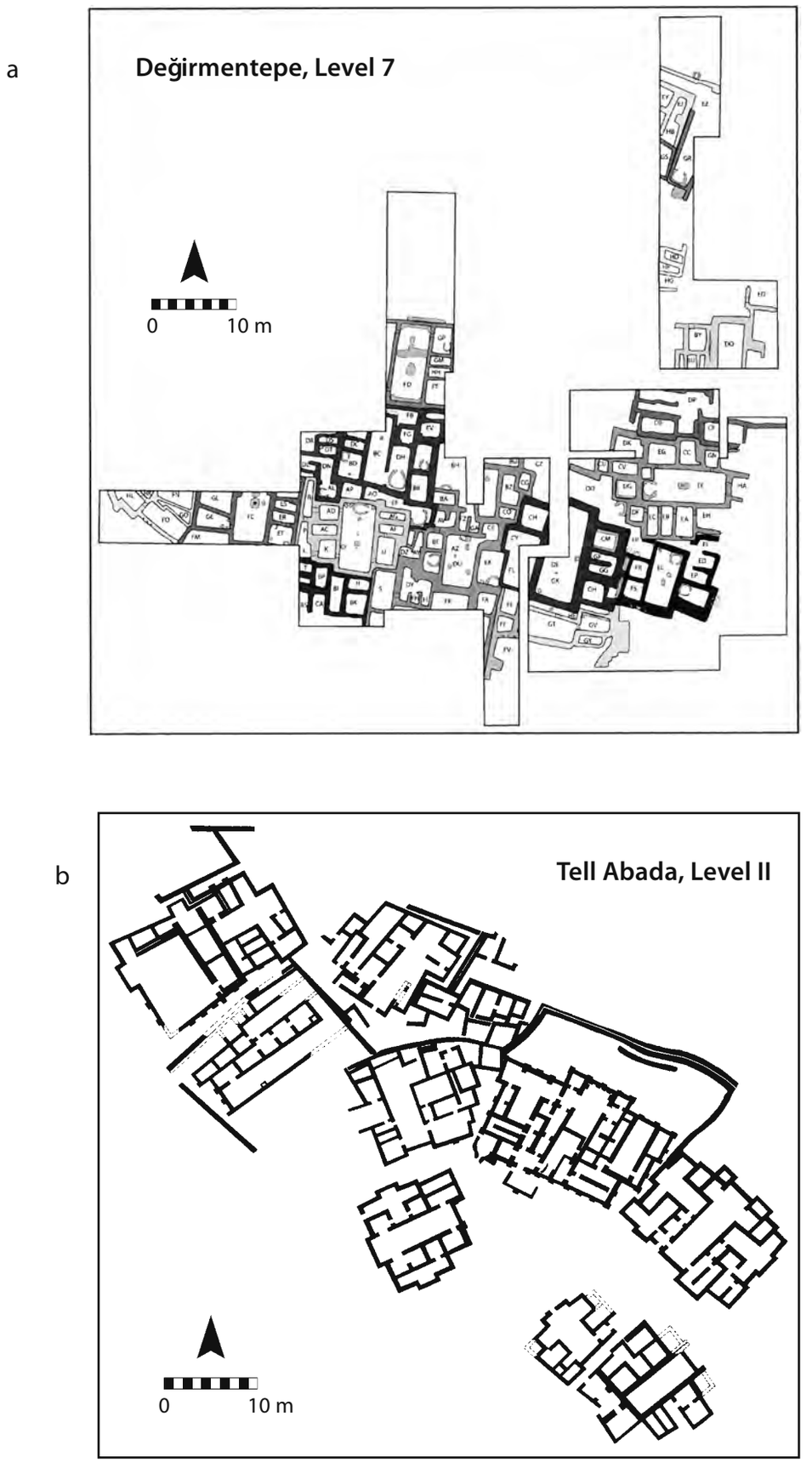


Figure 2.7. Ubaid tripartite house architecture from Değirmentepe, level 7 (after Stein and Özbal 2007: fig. 96), and Tell Abada (after Jasim 1985: fig. 13)

oi.uchicago.edu

settlements of this type are typical of both north Mesopotamian Jazira and Anatolian traditions as seen at sites such as Çatalhöyük, Yarim Tepe III, and Tepe Gawra. The transformation of southern and central Mesopotamian Ubaid house plans into this fundamentally different northern expression emphasizes the ways in which local northern cultures appropriated trans-regional styles of material culture to create a hybridized identity within the broader context of the Ubaid horizon.

INTERACTION SPHERES AND INTERREGIONAL INTERACTION IN THE UBAID HORIZON

The examples of Gawra and Değirmentepe both demonstrate that local regional identities persisted in northern (and presumably other) regions even within the framework of broad linkages as expressed through the shared use of selected styles of Ubaid material culture. While the terms "horizon style" or "Ubaid horizon" accurately describe a broad pattern, they have two key shortcomings. First, the term "horizon" emphasizes similarities across regions, but minimizes the importance of the local variation that co-exists with and permeates the veneer of similarities. Second, we need to understand the dynamic processes of interaction that generated the complementary patterns of local variation coexisting with selected pan-regional stylistic similarities.

Unfortunately, the most widely used models of interregional interaction, such as the world systems model, are predicated on the ideas of hierarchy, asymmetries between a core area and peripheries, and of the importance of long-distance exchange as the prime mover for social change (Stein 2002). We cannot assume that these conditions were characteristic of greater Mesopotamia in the fifth millennium. Instead, we need to broaden the scope of our analytical models to encompass frameworks that allow for, but do not presuppose, hierarchy. I suggest that the Ubaid horizon may be most usefully understood as a form of interaction sphere (Stein 1991; Yoffee 1993). Horizon styles can serve to demarcate what Joseph Caldwell (1964) called an "interaction sphere" in his analysis of the Hopewell culture in prehistoric North America. The term indicates that there were social, ideological, and trade connections among groups that shared a limited range of distinct material culture items. Interaction spheres link politically and culturally distinct regions or polities within a broader *oikumene*. The shared items of material culture form a symbolic vocabulary that expresses and helps to reproduce a common set of values and beliefs throughout the system.

J. Caldwell (1964) and Struever (1964) suggested that the shared symbolic elements in the Hopewellian horizon were related to either religious ideologies or emerging elite identities in a prestige goods system. However, it is important to emphasize that the generalized form of Caldwell's original model explicitly proposed that a wide variety of interactive processes could have functioned to create the linkages in an interaction sphere. These need not be restricted to elite prestige goods or religion. Thus, for example, Rita Wright (2002) has suggested that the third-millennium B.C. interaction sphere that linked the Indo-Iranian borderlands with Oman was based on linkages most clearly expressed in technological style. Christopher Carr (2005) proposes that a variety of different interactive processes, such as vision questing, pilgrimage, and trade in ritually powerful objects, could have formed material links across the Hopewellian horizon (Carr 2005: 575). Since the impetus for interaction rests at the local level, the specific links would vary from region to region. As a result, different forms of Hopewell material culture have distinct distributions, reflecting the differences in their roles within the interaction system (Carr 2005: 576). Thus, we can expect the factors that generate the linkages within interaction spheres to vary, not only between different historical cases, but even within any given network of cross-regional contacts.

While interaction spheres may have been common in incipient complex societies, there is no a priori reason to assume that these systems are restricted to such polities and their elites. The utility of the interaction sphere model rests precisely in the fact that it is a *non*-hierarchical construct; in this way, it differs fundamentally from world systems or core-periphery models with their assumptions of structural asymmetries between regions in their political economies. It is also important to recall that the concept of an interaction sphere makes no assumption of political or cultural unity within its boundaries, nor does it specify what social, economic, or power relations link the constituent groups.

In other words, the differences between the constituent local parts of an interaction sphere are as important as the small number of overarching similarities that link them. In fact, local variation is the factor that actually generates the interaction sphere in the first place. Carr and Case argue that in native North America, "the causes of interregional Hopewellian interaction are to be found in localized ideas and practices, and localized conditions, needs, and idiosyncratic events" (Carr and Case 2005: 21). They suggest that interaction and the resultant material similarities that link different regions derive directly "from the actions and practices of social actors in social roles, who were

oi.uchicago.edu

motivated by local conditions, local social demands, and individual needs to travel afar for materials, knowledge, ceremonial rights, power, and such and to engage socially with others interregionally."

This emphasis on the fundamental importance of local structures in generating and explaining inter-regional patterns and processes is what makes the interaction-sphere model particularly valuable for understanding the Ubaid horizon. This is particularly true once we recognize that interaction spheres do not have to be based on religious or elite ideologies. We can visualize greater Mesopotamia in the fifth millennium as composed of a set of distinct regions having different economic systems, and varying degrees of emergent social complexity. Although some regions (Ur/Eridu, central Mesopotamia, the eastern Jazira, and the Hamrin) seem to have shared in an emergent elite ideology encoded in exotic prestige goods such as stone mace-heads and stone palettes, the broader linkages across the Ubaid horizon seem to have been grounded in other, more inclusive ideological spheres. The variation in figurine styles and the absence of temples outside of the Ur/Eridu region — with the lone (and debated) exception of Tepe Gawra — argue against the role of religion as the key unifying ideology. Instead, the most widely distributed elements of Ubaid style and praxis are: the use of Ubaid ceramic styles, house forms, labrets and ear-spools, and the shift to cemetery (as opposed to household) burial. Taken together, these commonalities suggest that the crucial linkages in the Ubaid interaction sphere were those related to a very broad notion of identity at both the personal and the community level, so that individuals and groups were defining themselves as part of a larger inclusive *oikumene*. At the same time, the persistence of local characteristics suggests that regional identities and the broader Ubaid identity co-existed, so that one or the other came into play depending on the specific social context.

If this interpretation is correct, then the "Ubaid expansion" was the spread of an ideology of personal and community identity, rather than an elite or religious ideology. However, we still have no convincing explanation for why a super-regional structure of this type developed in the first place, and why it slowly faded away. One possible explanation might be that this very broadly defined shared identity would have facilitated inter-regional exchange between regions by creating a set of connections that could be invoked as needed by traders engaged in the procurement of obsidian, exotic stones, possibly textiles, and (increasingly) copper. This would be consistent with the apparent evidence for a steady increase in long-distance exchanges over the course of the fifth millennium from southeast Anatolia down to the Persian Gulf. However, if a super-regional Ubaid identity facilitated inter-regional exchange, then why did this identity decline and disappear in precisely those northern regions (northwest Syria, southeast Anatolia, and the eastern Jazira) that would have been critical to such an exchange system? Based on the currently available evidence, it seems that economic factors can only provide a partial explanation, at best, for the linkages that formed the Ubaid horizon. These major gaps in our understanding suggest that the dynamics of social identity and the locally generated motivations for interaction are two of the most important foci for future research on the Ubaid horizon.

CONCLUSIONS

The spread of the Ubaid into neighboring regions reflects the gradual, peaceful spread of an ideological system that was translated into a variety of different local cultural schemes, forming what are, in effect, new, hybrid social identities of both individuals and communities in these outlying areas. The Mesopotamian-centered focus on specifically Ubaid material culture has led researchers to downplay or even ignore non-Ubaid, local material culture, even when the latter predominates as a given site in regions such as northwest Syria, southeast Anatolia, the Jazira, and the western shore of the Persian Gulf. This selective vision has seriously compromised our ability to understand the multiple interacting societies that together comprised the Ubaid horizon. Ubaid material culture seems to have functioned as a marker of group identity, and not as part of a shared religion or a status marker for chiefly elites. In the regions outside of southern Mesopotamia proper, local identities persisted in parallel with Ubaid identities, but seem to have been expressed in different social and cultural contexts. Even though the external forms of Ubaid houses and pottery styles were similar in both southern Mesopotamia and the neighboring zones discussed in this essay, the ways that these material items were used and conceptualized in daily local practice reveal profound cultural differences within this interaction sphere. At a broader level, the interaction sphere model provides a flexibility that encourages us to examine both local societies and broader overarching social identities as complementary constructs, rather than as mutually exclusive alternatives. We may best be able to understand the Ubaid world by seeing it as simultaneously global and local.

oi.uchicago.edu

BIBLIOGRAPHY

Alizadeh, Abbas

1988 "Socio-economic Complexity in Southwestern Iran during the Fifth and Fourth Millennia B.C.: The Evidence from Tall-i Bakun A." *Iran* 26: 17–34.

1994 "Social and Economic Complexity and Administrative Technology in a Late Prehistoric Context." In *Archives before Writing* (Proceedings of the International Colloquium, Oriolo Romano, October 23–25, 1991), edited by P. Ferioli, E. Fiandra, G. G. Fissore, and M. Frangipane, pp. 35–58. Pubblicazioni del Centro Internazionale di Ricerche Archeologiche, Antropologiche e Storiche 1. Turin: Scriptorium.

2006 *The Origins of State Organizations in Prehistoric Highland Fars, Southern Iran: Excavations at Tall-e Bakun*. Oriental Institute Publications 128. Chicago: The Oriental Institute.

Amiet, Pierre

1972 *Glyptique Susienne: Des origines a l'époque des Perses Achemenides*. Mémoires de la Délégation archéologique en Iran 43. Paris: P. Geuthner.

Berman, Judith C.

1994 "The Ceramic Evidence for Sociopolitical Organization in Ubaid Southwest Iran." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 23–33. Monographs in World Archaeology 18. Madison: Prehistory Press.

Blanton, R. E.; Gary M. Feinman; S. A. Kowalewski; and P. Peregrine

1996 "A Dual-Processual Theory for the Evolution of Mesoamerican Civilization." *Current Anthropology* 37: 1–14.

Breniquet, Catherine

1987 "Nouvelle hypothèse sur la disparition de la culture de Halaf." In *Préhistoire de la Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du djebel Hamrin* (Colloque International du Centre National de la Recherche Scientifique, Paris 17–19 décembre 1984), edited by J.-L. Huot, pp. 231–41. Paris: Éditions du Centre National de la Recherche Scientifique.

1989 "Les origines de la culture d'Obeid en Mésopotamie du nord." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 325–38. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

2001 "Figurines Ophidiennes." In *Études mésopotamiennes: Recueil de textes offert à Jean-Louis Huot*, edited by C. Breniquet and C. Kepinski, pp. 45–55. Paris: Éditions recherches sur les civilisations.

Caldwell, D.

1976 "The Early Glyptic of Gawra, Giyan, and Susa, and the Development of Long Distance Trade." *Orientalia*, n.s., 45: 227–50.

Caldwell, Joseph R.

1964 "Interaction Spheres in Prehistory." In *Hopewellian Studies*, edited by J. R. Caldwell and R. L. Hall, pp. 133–43. Illinois State Museum Scientific Papers 12. Springfield: Illinois State Museum.

Canal, D.

1978 "La terrasse haute de l'Acropole de Suse." *Cahiers de la délégation archéologique française en Iran* 9: 11–56.

Carr, Christopher

2005 "Rethinking Interregional Hopewellian 'Interaction.'" In *Gathering Hopewell: Society, Ritual, and Ritual Interaction*, edited by C. Carr and D. T. Case, pp. 575–623. New York: Kluwer Academic/Plenum Publishers.

Carr, Christopher, and D. Troy Case

2005 "The Gathering of Hopewell." In *Gathering Hopewell: Society, Ritual, and Ritual Interaction*, edited by C. Carr and D. T. Case, pp. 19–29. New York: Kluwer Academic/Plenum Publishers.

oi.uchicago.edu

Carter, Robert A.

2002 "Ubaid-Period Boat Remains from as-Sabiyah: Excavations by the British Archaeological Expedition to Kuwait." *Proceedings of the Seminar for Arabian Studies* 32: 13–30.

2006 "Boat Remains and Maritime Trade in the Persian Gulf during 6th and 5th Millennia B.C." *Antiquity* 80: 52–63.

Carter, Robert A., and Harriet Crawford

2002 "The Kuwait-British Archaeological Expedition to as-Sabiyah: Report on the Third Season's Work." *Iraq* 64: 1–13.

Connan, J., and Yoshihiro Nishiaki

2003 "The Bituminous Mixtures of Tell Kosak Shamali on the Upper Euphrates (Syria) from the Early Ubaid to the Post-Ubaid: Composition of Mixtures and Origin of Bitumen." In *Tell Kosak Shamali: The Archaeological Investigations on the Upper Euphrates, Syria*, Volume 2: *Chalcolithic Technology and Subsistence*, edited by Y. Nishiaki and T. Matsutani, pp. 283–306. University Museum, University of Tokyo Monograph 2. Tokyo: The University Museum, University of Tokyo; Oxford: Oxbow Books.

Daems, Aurelie, and Karina Croucher

2007 "Artificial Cranial Modification in Prehistoric Iran: Evidence From Crania and Figurines." *Iranica Antiqua* 42: 1–21.

Davidson, Thomas E., and H. McKerrell

1980 "The Neutron Activation Analysis of Halaf and Ubaid Pottery from Tell Arpachiyah and Tepe Gawra." *Iraq* 52: 155–67.

Desse, J.

1983 "Les faunes du gisement obeidien finale de Tell el Oueili." In *Larsa (8ème et 9ème campagnes, 1978 et 1981) et Oueili (2ème et 3ème campagnes, 1978 et 1981): Rapport préliminaire*, edited by J.-L. Huot, pp. 193–99. Paris: Éditions recherches sur les civilisations.

1987 "Analyse des ossement provenant desniveux inférieurs de Tell el Oueili." In *Larsa (10e campagne, 1983) et Oueili (4e campagne, 1983): Rapport préliminaire*, edited by J.-L. Huot, pp. 159–60, Paris: Éditions recherches sur les civilisations.

1996 "Les ossements animaux des campagnes de 1987 et 1989 à Tell el Oueili." In *Oueili: Travaux de 1987 et 1989*, edited by J.-L. Huot, pp. 307–10. Paris: Éditions recherches sur les civilisations.

Esin, Ufuk

1989 "An Early Trading Center in Eastern Anatolia." In *Anatolia and the Ancient Near East: Studies in Honor of Tahsin Özgüç*, edited by K. Emre, M. Mellink, B. Hrouda, and N. Özgüç, pp. 135–41. Ankara: Türk Tarih Kurumu.

1994 "The Functional Evidence of Seals and Sealings of Değirmentepe." In *Archives before Writing: Proceedings of the International Colloquium, Oriolo Romano, October 23–25, 1991*, edited by P. Ferioli, E. Fiandra , G. G. Fissore, and M. Frangipane, pp. 59–81. Turin: Scriptorium.

Feinman, Gary M.

1995 "The Emergence of Inequality: A Focus on Strategies and Processes." In *Foundations of Social Inequality*, edited by T. D. Price and G. M. Feinman, pp. 255–79. Fundamental Issues in Archaeology. New York: Plenum.

Flannery, Kent V.

1999 "Chiefdoms in the Early Near East: Why Its so Hard to Identify Them." In *The Iranian World: Essays on Iranian Art and Archaeology Presented to Ezat O. Neghaban*, edited by A. Alizadeh, Y. Majidzadeh, and S. M. Shahmirzadi, pp. 44–58. Tehran: Iran University Press.

Flannery, Kent V., and I. W. Cornwall

1969 "The Fauna from Ras al Amiya, Iraq: A Comparison with the Deh Luran Sequence." In *Prehistory and Human Ecology of the Deh Luran Plain*, edited by F. Hole, K. V. Flannery, and J. A. Neely, pp. 435–38. Memoirs of the Museum of Anthropology 1. Ann Arbor: University of Michigan.

Flannery, Kent V., and Henry T. Wright

1966 "Faunal Remains from the 'Hut Sounding' at Eridu." *Sumer* 22: 61–63.

oi.uchicago.edu

Forest, Jean-Daniel

1987 "La grande architecture Obedienne: Sa forme et sa fonction." In *Préhistoire de la Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du djebel Hamrin* (Colloque International du Centre National de la Recherche Scientifique, Paris 17–19 décembre 1984), edited by J.-L. Huot, pp. 385–423. Paris: Éditions du Centre National de la Recherche Scientifique.

Gourichon, L., and D. Helmer

2003 "Preliminary Analysis of the Faunal Remains from Tell Kosak Shamali (Syria): Squares AD5, AE5, AF5, BD6, and BE6." In *Tell Kosak Shamali: The Archaeological Investigations on the Upper Euphrates, Syria*, Volume 2: *Chalcolithic Technology and Subsistence*, edited by Y. Nishiaki and T. Matsutani, pp. 273–82. University Museum, the University of Tokyo Monograph 2. Tokyo: The University Museum, University of Tokyo; Oxford: Oxbow Books.

Hall, Robert L.

1997 *An Archaeology of the Soul*. Native American Studies. Urbana: University of Illinois Press.

Henrickson, Elizabeth F., and Ingolf Thuesen, editors

1989 *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988). Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Hole, Frank

1983 "Symbols of Religion and Social Organization at Susa." In *The Hilly Flanks and Beyond: Essays on the Prehistory of Southwestern Asia Presented to Robert J. Braidwood*, edited by T. C. Young, P. E. L. Smith, and P. Mortensen, pp. 315–33. Studies in Ancient Oriental Civilization 36. Chicago: The Oriental Institute

1989 "Patterns of Burial in the Fifth Millennium." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 149–80. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

1994 "Environmental Instabilities and Urban Origins." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 121–51. Monographs in World Archaeology 18. Madison: Prehistory Press.

Huot, Jean-Louis

1989 "Ubaidian Villages of Lower Mesopotamia: Permanence and Evolution from 'Ubaid 0 to 'Ubaid 4 as Seen from Tell el'Oueilli." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 19–42. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

1996 *Oueili: Travaux de 1987 et 1989*. Paris: Éditions recherches sur les civilisations.

Jasim, Sabah A.

1985 *The 'Ubaid Period in Iraq: Recent Excavations in the Hamrin Region*. British Archaeological Reports, International Series 267. Oxford: British Archaeological Reports.

1989 "Structure and Function in an 'Ubaid Village." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 79–90. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Johnson, Gregory A.

1973 *Local Exchange and Early State Development in Southwestern Iran*. Anthropological Papers 51. Ann Arbor: University of Michigan, Museum of Anthropology.

Kouchoukos, Nicholas

1998 Landscape and Social Change in Late Prehistoric Mesopotamia. Ph.D. dissertation, Yale University.

oi.uchicago.edu

Kouchoukos, Nicholas, and Frank Hole
2003 "Changing Estimates of Susiana's Prehistoric Settlement." In *Yeki Bud, Yeki Nabud: Essays on the Archaeology of Iran in Honor of William M. Sumner*, edited by N. F. Miller and K. Abdi, pp. 52–60. Los Angeles: Cotsen Institute of Archaeology, University of California.

Malinowski, Bronislaw
1950 *Argonauts of the Western Pacific: An Account of Native Enterprise and Adventure in the Archipelagoes of Melanesian New Guinea*. Studies in Economics and Political Science 65. New York: E. P. Dutton. (Original publication 1922)

Mallowan, M. E. L., and J. Cruikshank Rose
1935 "Excavations at Tall Arpachiyah, 1933." *Iraq* 2: 1–178.

Matthews, Roger
2001 "From Kuwait to Ras al-Khaimah: Ubaid Connections in the Gulf." In *Études mésopotamiennes: Recueil de textes offert à Jean-Louis Huot*, edited by C. Breniquet and C. Kepinski-Lecomte, pp. 348–61. Paris: Éditions recherches sur les civilisations.
2003 *The Archaeology of Mesopotamia: Theories and Approaches*. London: Routledge.

Moore, A. M. T.
2002 "Pottery Kiln Sites at al-'Ubaid and Eridu." *Iraq* 64: 69–77.

Moorey, P. R. S.
1994 *Ancient Mesopotamian Materials and Industries*. Oxford: Clarendon Press.

Nissen, Hans J.
1989 "The Ubaid Period in the Context of the Early History of the Ancient Near East." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 245–55. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Oates, Joan; T. E. Davidson; D. Kamilli; and H. McKerrell
1977 "Seafaring Merchants of Ur?" *Antiquity* 51: 221–34.

Oates, Joan, and David Oates
2004 "The Role of Exchange Relations in the Origins of Mesopotamian Civilization." In *Explaining Social Change: Studies in Honour of Colin Renfrew*, edited by J. F. Cherry, C. Scarre, and S. Shennan, pp. 177–92. Cambridge: McDonald Institute Monographs.

Pollock, Susan
1989 "Power Politics in the Susa A Period." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 281–92. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Pournelle, Jennifer R.
2003 "The Littoral Foundations of the Uruk State: Using Satellite Photography Toward a New Understanding of 5th/4th Millennium Landscapes in the Warka Survey Area, Iraq." In *Chalcolithic and Early Bronze Age Hydrostrategies*, edited by D. Gheorghiu, pp. 5–24. British Archaeological Reports, International Series 1123. Oxford: Archaeopress.

Renfrew, Colin
1974 "Beyond a Subsistence Economy: The Evolution of Social Organization in Prehistoric Europe." In *Reconstructing Complex Societies*, edited by C. Moore, pp. 69–95. American Schools of Oriental Research, Bulletin, Supplementary Studies 20. Boston: American Schools of Oriental Research.

Roaf, Michael
1984 "Ubaid Houses and Temples." *Sumer* 43: 80–90.
1989 "Social Organization and Social Activities at Tell Madhhur." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 91–146. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

oi.uchicago.edu

Rothman, Mitchell S.

2002a *Tepe Gawra: The Evolution of a Small, Prehistoric Center in Northeastern Iraq*. University Museum Monograph 112. Philadelphia: University of Pennsylvania, Museum of Archaeology and Anthropology.

2002b "Tepe Gawra: Chronology and Socio-Economic Change in the Foothills of Northern Iraq in the Era of State Formation." In *Artefacts of Complexity: Tracking the Uruk in the Near East*, edited by J. N. Postgate, pp. 49–78. Iraq Archaeological Reports 5. Warminster: British Institute of Archaeology in Iraq.

Rothman, Mitchell S., and M. J. Blackman

2003 "Late Fifth and Early Fourth Millennium Exchange Systems in Northern Mesopotamia: Chemical Characterization of Sprig and Impressed Wares." *Al-Rafidan* 24: 1–24.

Safar, Fuad; Mohamed A. Mustafa; and Seton Lloyd

1981 *Eridu*. Baghdad: Ministry of Culture and Information.

Schmidt , J.

1974 "Zwei Tempel der Obed-Zeit in Uruk." *Baghdader Mitteilungen* 7: 173–87.

Stein, Gil J.

1991 "Imported Ideologies and Local Identities: North Mesopotamia in the Fifth Millennium B.C." Paper presented at the Society for American Archaeology 56th Annual Meeting, New Orleans. April 26, 1991.

1994 "Economy, Ritual and Power in 'Ubaid Mesopotamia." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 35–46. Monographs in World Archaeology 18. Madison: Prehistory Press.

2002 "Distinguished Lecture: From Passive Periphery to Active Agents; Emerging Perspectives in the Archaeology of Interregional Interaction." *American Anthropologist* 104: 903–16.

Stein, Gil J., and Rana Özbal

2007 "A Tale of Two *oikumenai*: Variation in the Expansionary Dynamics of 'Ubaid and Uruk Mesopotamia." In *Settlement and Society: Essays Dedicated to Robert McCormick Adams*, edited by E. C. Stone, pp. 329–42. Ideas, Debates and Perspectives 3. Los Angeles: Cotsen Institute of Archaeology; Chicago: The Oriental Institute.

Stronach, David

1961 "Excavations at Ras al 'Amiya." *Iraq* 23: 95–137.

Struever, S.

1964 "The Hopewellian Interaction Sphere in Riverine-Western Great Lakes Culture History." In *Hopewellian Studies*, edited by J. R. Caldwell and R. L. Hall, pp. 87–106. Illinois State Museum Scientific Papers 12. Springfield: Illinois State Museum.

Tajfel, Henri, editor

1982 *Social Identity and Intergroup Relations*. European Studies in Social Psychology. Cambridge: Cambridge University Press.

Tajfel, Henri, and J. C. Turner

1986 "The Social Identity Theory of Inter-Group Behavior." In *Psychology of Intergroup Relations*, edited by S. Worchel and L. W. Austin. Chicago: Nelson-Hall.

Thuesen, Ingolf

1989 "Diffusion of 'Ubaid Pottery into Western Syria." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 418–37. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

1992 "Information Exchange in the Ubaid Period in Mesopotamia and Syria." In *La circulation des biens, des personnes et des idées dans le Proche-Orient ancien* (Actes de la 38^{e} Rencontre assyriologique internationale, Paris, 8–10 juillet 1991), edited by D. Charpin and F. Joannes, pp. 13–19. Paris: Éditions recherches sur les civilisations.

2000 "Ubaid Expansion in the Khabur: New Evidence from Tell Mashnaqa." In *La Djéziré et l'Euphrate Syriens de la protohistoire à la fin du II^{e} millénaire av. J.-C.: Tendances dans l'interprétation historique des données nouvelles*, edited by O. Rouault and M. Wäfler, pp. 71–79. Subartu 7. Turnhout: Brepols.

oi.uchicago.edu

Tobler, Arthur J.
1950 *Excavations at Tepe Gawra: Joint Expedition of the Baghdad School and the University Museum to Mesopotamia*, Volume 2: *Levels IX–XX*. Museum Monographs. Philadelphia: University of Pennsylvania Press.

Turner, J. C.
1982 "Towards a Cognitive Redefinition of the Social Group." In *Social Identity and Intergroup Relations*, edited by H. Tajfel, pp. 15–40. Cambridge: Cambridge University Press.

Uberoi, J. P. Singh
1962 *Politics of the Kula Ring: An Analysis of the Findings of Bronislaw Malinowski*. Manchester: Manchester University Press.

Weiss, Harvey
1983 "Excavations at Tell Leilan and the Origins of North Mesopotamian Cities in the Third Millennium B.C." *Paléorient* 9: 39–52.

Wilkinson, Tony J.
2000 "Regional Approaches to Mesopotamian Archaeology: The Contribution of Archaeological Surveys." *Journal of Archaeological Research* 8: 219–67.
2003 "Archaeological Survey and Long-Term Population Trends in Upper Mesopotamia and Iran." In *Yeki Bud, Yeki Nabud: Essays on the Archaeology of Iran in Honor of William M. Sumner*, edited by N. F. Miller and K. Abdi, pp. 39–51. Los Angeles: Cotsen Institute of Archaeology.

Wilkinson, Tony J., and D. J. Tucker
1995 *Settlement Development in the North Jazira, Iraq: A Study of the Archaeological Landscape*. Iraq Archaeological Reports 3. Warminster: Aris & Phillips.

Wright, Henry T.
1981 "Appendix: The Southern Margins of Sumer." In *Heartland of Cities: Surveys of Ancient Settlement and Land Use on the Central Floodplain of the Euphrates*, edited by R. McC. Adams, pp. 295–345. Chicago: University of Chicago Press.
1984 "Prestate Political Formations." In *On the Evolution of Complex Societies: Essays in Honor of Harry Hoijer*, edited by W. Sanders, H. Wright, and R. M. Adams, pp. 41–77. Malibu: Undena Press.

Wright, Henry T., and Gregory A. Johnson
1975 "Population, Exchange, and Early State Formation in Southwestern Iran." *American Anthropologist* 77: 267–89.

Wright, Henry T., and Susan Pollock
1987 "Regional Socio-Economic Organization in Southern Mesopotamia: The Middle and Later Fifth Millennium." In *Préhistoire de la Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du djebel Hamrin* (Colloque International du Centre National de la Recherche Scientifique, Paris 17–19 décembre 1984), edited by J.-L. Huot, pp. 317–29. Paris: Éditions du Centre National de la Recherche Scientifique.

Wright, Rita
2002 "Revisiting Interaction Spheres: Social Boundaries and Technologies on Inner and Outermost Frontiers." *Iranica Antiqua* 37: 403–17.

Yoffee, Norman
1993 "Mesopotamian Interaction Spheres." In *Early Stages in the Evolution of Mesopotamian Civilization: Soviet Excavations in Northern Iraq,* edited by N. Yoffee and J. Clark, pp. 257–69. Tucson: University of Arizona Press.
2005 *Myths of the Archaic State: Evolution of the Earliest Cities, States and Civilizations*. Cambridge. Cambridge University Press.

Zeder, Melinda A.
1995 "The Archaeobiology of the Khabur Basin." *Bulletin of the Canadian Society for Mesopotamian Studies* 29: 21–32.

oi.uchicago.edu

3

MORE THOUGHTS ON THE UBAID PERIOD

JOAN OATES, *McDonald Institute for Archaeological Research*

TERMINOLOGY

The terminology that we apply in any archaeological context is no more than a figment of our own invention. Certainly such labels bear little inherent relationship to the past societies we wish to comprehend. Often we look at little more than pottery, arguably of convenience to the archaeologist but hardly, despite the probable role of ceramics in ritual and/or social representation, of unique significance to the society we are attempting not only to "classify" chronologically, but also, more importantly, to understand.

At the end of this most enjoyable conference there was some discussion of the validity, or not, of the labels for which I fear I am responsible, during which the desirability of a shift to "chalcolithic" designations was mentioned. In the end, the existing system seemed to gain preference, but not with any enthusiasm. One reason for such apparent conservatism is, of course, the desire to communicate with scholars worldwide, who may not always be aware of the very latest terminological revisions. Moreover, despite the many authoritative contributions to the excellent Santa Fe volume (Rothman 2001), there remain contradictions among the contributors themselves as to the precise attribution of various site levels within the sub-phases of the "Late Chalcolithic" and even the ceramic definition of some of these phases. This is likely to be even more of a problem in attempting to "re-classify" Ubaid materials, given the regrettable paucity of reliable Ubaid sequences.

The use of radiocarbon determinations emerged clearly as the favored way forward, providing an "independent" and non-judgmental dating system that would allow genuine assessments of diachronic change. But dating per se does not resolve broader "cultural" questions, and there is no agreed mechanism for comparing recent dates with those run thirty or forty years ago, or dates taken from samples of different materials.

Another feature of "naming" is that it is a direct reflection of the time when the name is first advocated. My proposal was the result of examination, in the winter of 1951/1952, of the prehistoric sherds from the site of Eridu, stored in the Mustansiriyah which then provided storerooms for the old Iraq Museum, just across the street. At that time the only other occupant of this great mediaeval madrasah was the guard, and my examination of the very numerous sherds was at times hindered by the presence of even more numerous pigeons. I shall remain forever grateful for the kindness and encouragement of the Museum staff in general, but especially to Fuad Safar and Mohamed Ali Mustafa, who generously shared not only their sherds, at that time unique, but also their knowledge of the site of Eridu with a totally unknown research student. The choice of the label "Ubaid" reflected not only the number of sites at which the later phases of such pottery had already been identified, but the fact that at the type site itself many "Eridu" and "Hajji Muhammad" sherds had already been found, though without context, and accepted as Ubaid (Hall and Woolley 1927: pl. 51), a fact the excavators of Eridu also recognized. (A number of these sherds are now in the British Museum.)

THE "HISTORICAL" FRAMEWORK

> … First of all Sir Leonard Woolley discovered that the site of 'Al Ubaid actually represented a settlement or village corresponding to phase one. Here the first arrivals in south Iraq had built themselves reed-huts on the fertile islands which were beginning to appear in the marshes of the drying delta. Everywhere among their huts he found the greenish pottery with the black designs which had sufficiently close parallels with pottery found

oi.uchicago.edu

> at sites like Susa to suggest that the people who made it had descended into Iraq from the Iranian highlands…. Thus it could be said that the evolution of our precociously cultured Sumerians was parallel to and contemporary with the first appearance of the alluvial plain, which is now south Iraq, from beneath the receding head of the Persian Gulf during the fourth millennium B.C. (Lloyd 1947: 213–14).

My choice of a "numerical" classification was made at a time when (1) archaeologists tended to associate innovations in material culture with "new people," often proposed as "migrations"; (2) when the prehistory of Sumer was still plagued by the long-held belief, first challenged by Lees and Falcon (1952), that Eridu and Ur were situated on the shores of a receding Gulf, that is, that there could be no earlier prehistory in Sumer;[1] and (3) there was an underlying assumption that all painted pottery originated in Iran. Thus the migration of new people into Sumer provided the obvious model, especially in considering the origins of the Sumerians themselves, the focus of my initial interest.

My original "divisions" did not apply simply to pottery, however, but also to building plans and techniques together with the small finds, for example, the apparent distribution of clay mullers and sickles (Ubaid 3–4) and the Samarran-related "husking trays" (Ubaid 1–2) (see Safar, Mustafa, and Lloyd 1981: fig. 72). Most strikingly, the Eridu level XV building, apparently rebuilt in level XIV, differed markedly from all the other Eridu "temples," not only in plan but also in the unusual bricks used (Safar, Mustafa, and Lloyd 1981: 88–90). This also marks the point at which the associated pottery becomes largely Hajji Muhammad" in style though some "Eridu" types persist. More conventional Ubaid 3 appears in quantity only in level XII. It is for this reason that I persist in my original view that there is at Eridu evidence for a "timespan" in which the Hajji Muhammad style is dominant and more "conventional" Ubaid types have yet to appear, a view perhaps reinforced by the unusual architecture in these levels and the fact that one of the most distinctive Hajji Muhammad types has yet to be found in any secure Ubaid 3 context (Safar, Mustafa, and Lloyd 1981: fig. 90:6, 8, and fig. 106:2–4). Certainly the excavators of Eridu saw the Hajji Muhammad style as "intermediate" between "Eridu" and what was at the time thought to be "conventional Ubaid," and this would seem to remain the case:

> … if ceramic evidence alone may be accepted, the first arrivals were probably displaced by a new ethnic element, whose entire character is already well authenticated and familiar to archaeologists under the name Al Ubaid. One notable link between these two cultures, the pre-Ubaid and the Ubaid, was again a ceramic one. A peculiar variant of the former, first known to have been produced by potters living in a village … bearing the name of Qal'at Hajj Mohammed, proves to have been in common use from about half way through the pre-Ubaid occupation …. Other indications suggest that the habits and life-pattern of the community were neither disrupted nor even greatly changed by this transition (Safar, Mustafa, and Lloyd 1981: 45).

So what were my 1–4 divisions intended to mean? Of primary importance was the convincing argument for continuity throughout these phases. But this classification was also little more than what I hoped would prove a useful division of time within what I believed to represent a related sequence of cultural materials, cultural in the sense of communities living in similar types of houses and using comparable tools and other types of objects, pottery, and symbols, changing over time but never abruptly. This is not intended as an argument for keeping the "numerical" system, only an explanation of its genesis.

A further, and much more complicated, difficulty lies in the assumption of cultural similarity in the use of the term "Ubaid" at many more peripheral sites. Such a statement also implies the presence of a "center" or "homeland" which may or may not actually exist. On current evidence the combination of Eridu and purely Hajji Muhammad pottery is confined to Sumer and, perhaps surprisingly, the site of Halili (H200) on the Bushehr Peninsula, identified by Andrew Williamson and Martha Prickett over thirty years ago. A combination of the drawings sent to me in 1976 together with a further set of sherds now in the possession of Rob Carter confirms the presence there of one of the most recognizable Ubaid 1 "type fossils" (that illustrated in color on the cover of the Eridu publication), together with a variety of sherds in the (Ubaid 2) Hajji Muhammad style. Susiana types are also reported at the site, and Diana Kamilli's analyses are said to indicate both local and Mesopotamian sources — "some is potentially imported, while others show a local (or non-Mesopotamian) character" (M. Prickett, pers. comm., 31 July 1976). That is, the site is not exclusively Mesopotamian in that both Mesopotamian and Susiana sherds are present.

---

[1] Also in 1952, I had collected a number of alleged "sea shells" in the areas of Warka and Eridu, remnants of the assumed recession of the Gulf; these were identified by the Natural History Museum (London) as entirely of freshwater species (Oates [Lines] 1953: 377). Reference should now be made to Jennifer Pournelle's (2003) important satellite-image studies of the ancient landscape.

oi.uchicago.edu

An earlier stage, now known somewhat jokingly as Ubaid 0, is of course closely related to the so-called Choga Mami Transitional (a term for which I am not responsible), providing what may ultimately prove to have been a wider cultural framework over the whole of southern Mesopotamia. Here, undoubtedly, is both a new and a significant, Ubaid-related topic for future investigation. Certainly the important excavations at 'Oueili have added an impressive, indeed extraordinary, dimension to the early prehistory of Sumer (Huot 1996). Significant also is the fact that the presence at Chogha Sefid of pottery indistinguishable from that from Choga Mami marks the earliest appearance of black-on-buff ware in Khuzistan (Hole 1977: 12). Indeed this is the one point when identical pottery appears both in Khuzistan and in central/southern Mesopotamia, the relationship between Choga Mami and Chogha Sefid being remarkably close at this time (Hole 1977: 12; Oates 2004: 92).

BOUNDARIES AND DEFINITIONS

Comment was made concerning the tendency to think in terms from southern Mesopotamia outward. Yet in the past few years a number of papers have emphasized the importance of more recently excavated northern evidence, demonstrating not only convincing priorities of development and invention (the extensive use of seals, for example, and early forms of "notation"), but also increasing evidence for an unexpected degree of stratification, complexity, and organization already in the fifth millennium (inter alia, Frangipane 2001; Stein 2002; Oates and Oates 2004; Oates et al. 2007). McGuire Gibson was sufficiently bold to use the terms "civilization" and "state" in his paper, while he argues elsewhere for "local state-level polities" before the Late Uruk intrusion into the north (2000: 477). Certainly recent work in northeastern Syria and southeastern Turkey is revealing far more early complexity than had previously been suspected.

It was also agreed that we should be quite clear about how we are using the term "Ubaid," which in some papers referred solely to a relatively small quantity of pottery and in others, of course, to what has been widely accepted as an "Ubaid culture," involving architecture, personal ornamentation, and a range of quite distinctive small objects in addition to the pottery itself. Indeed the latest "Ubaid sherds" reported to me are from Tel Tsaf, an impressive Chalcolithic site in Israel being excavated by Yossi Garfinkel, at least a clear case where there is unlikely to be any claim of an Ubaid "culture." Sites elsewhere in the Levant and in southeastern Anatolia constitute more of a problem, not helped by lack of publication. Many years ago (in my dissertation days) I spent a great deal of time in the museums of Aleppo, Antakya, Adana, Ankara, and also in the Louvre, pursuing just this question. My information is clearly years out of date and I make no claim to any wider knowledge than was then possible, but it was certainly clear then that much of the pottery claimed as Ubaid was much better described as "Ubaid-related" and that at least some of it, especially in Cilicia, was of slightly later date.

On the other hand, the site of Degirmentepe provides very convincing Ubaid occupation, with tripartite houses, large quantities of Ubaid pottery, seals and sealings closely comparable with those of Tepe Gawra, and a number of objects such as figurines, clay mullers, and even clay sickles despite the ready accessibility of both flint and obsidian (Esin 1989: 136). Degirmentepe has been seen as a "copper-producing colony site." Only further investigation and extensive publication of other sites in southeastern Turkey will resolve the true nature of the Ubaid presence in this area. A ripe area for Ph.D.s of the future.

GENERAL COMMENTS

In the notes supplied to contributors following the conference, we were urged to focus on the meaning of Ubaid itself, and not to be misled by the attraction of its role in the growth of later complexity. Yet the fact that this period attracts such a large share of attention in the context of prehistoric Mesopotamia seems to me to reflect not just the interesting questions of acculturation and/or migration, but also the very fact of its importance in the development of later Sumerian society. For me at least this remains one of the most interesting features of the Ubaid period, especially in the light of the complexity now being revealed in the investigation of late fifth-millennium (Early Northern Uruk/Late Chalcolithic 2) levels at Tells Brak and Hamoukar in northeastern Syria (Oates 2005; Oates et al. 2007; McMahon and Oates 2007; Gibson et al. 2002), the settlement at Brak occupying some 100 ha well before the south-

oi.uchicago.edu

ern Uruk intrusion. There is also at Brak a substantial Ubaid settlement, of which up to now we have reached only the very latest levels where a clearly monumental platform of *patzen* bricks was identified (Area CH). Regrettably, we have yet to reach a wider exposure, but we hope in future excavations to learn more of a possible Ubaid role in the early urbanism we are seeing already late in the fifth millennium.

I also find it slightly odd that the many unresolved questions in earlier Mesopotamian prehistory seem to attract less attention. Similar questions of acculturation or "migration," for example, arise in the context of the relationship between Hassuna and Samarra within Mesopotamia itself, and in the role of Samarran Mesopotamia in the origins of Halaf, particularly in the context of the Sabi Abyad sealings and so-called proto-Halaf pottery where much appears to me to be of Samarran or Samarra-related origin (cf., inter alia, Akkermans and Duistermaat 1997; Cruells and Nieuwenhuyse 2004). These are also relevant to a consideration of the relationship between central Mesopotamian "Samarra" and Ubaid 0 at 'Oueili, questions that remain fundamental to our understanding of Mesopotamian prehistory. Perhaps it is no more than the extraordinary extent of Ubaid influence that attracts attention, and that has of course allowed the continuing investigation of Ubaid sites in peripheral areas while Mesopotamia itself remains regrettably inaccessible. It is unfortunate that we continue to know relatively little about Ubaid Mesopotamia itself, a fact emphasized by the numerous references during the conference to Tell Abada, a small and relatively peripheral site, but important for its excellent excavation and full publication.

In the conclusion to a paper in the Braidwood festschrift, written some twenty-five years ago, I wrote,

> There are hints in the archaeological data of growing economic — possibly even "political" — authority; in the increasing size of settlement implying a need for more formal "political" controls; and in the continuing contact … with distant parts of the Gulf, evidence implying an advancement of society that is otherwise ill-documented. Until a major Ubaid site is extensively excavated, however, we shall remain in ignorance of such more developed facets of Ubaid life …. Most of our ignorance unfortunately stems from a basic fact of life in Mesopotamian archaeology — that major prehistoric sites tend to be situated in well-endowed or strategic locations where, for these reasons, settlement often persisted for millennia, making the lateral excavation of their early levels both a physical and a financial impossibility. Until the day when such a site is extensively excavated we shall undoubtedly continue to underestimate the achievements of the people whose activities almost certainly provided the initial stimulus to the growth of Sumerian society (1983: 263).

The problem of archaeological accessibility will undoubtedly continue to blur the true nature of Ubaid society, as will the current and much-to-be-regretted inaccessibility of sites in southern Mesopotamia. I hope, however, that I shall see the day when Iraq becomes again the lovely country I knew years ago, when it will be possible further to investigate the period that I believe played such an important role in the development of societies that themselves contributed ultimately to the classical world and indirectly to our own "civilization."

BIBLIOGRAPHY

Akkermans, Peter M. M. G., and K. Duistermaat

1997 "Of Storage and Nomads: The Sealings from Late Neolithic Sabi Abyad, Syria." *Paléorient* 22: 17–44.

Cruells, W., and Olivier Nieuwenhuyse

2004 "The Proto-Halaf Period in Syria. New Sites, New Data." *Paléorient* 30: 47–68.

Esin, Ufuk

1989 "An Early Trading Center in Eastern Anatolia." In *Anatolia and the Ancient Near East: Studies in Honor of Tahsin Özgüç*, edited by K. Emre, M. Mellink, B. Hrouda, and N. Özgüç, pp. 135–41. Ankara: Türk Tarih Kurumu.

Frangipane, Marcella

2001 "Centralization Processes in Greater Mesopotamia: Uruk 'Expansion' as the Climax of Systemic Interactions among Areas of the Greater Mesopotamian Region." In *Uruk Mesopotamia and Its Neighbors: Cross-Cultural Interactions in the Era of State Formation*, edited by M. S. Rothman, pp. 307–47. Santa Fe: School of American Research Press.

oi.uchicago.edu

Gibson, McGuire

2000 "Tell Hamoukar: Early City in Northeastern Syria." *Antiquity* 74: 477–78.

Gibson, McGuire; Amr al-Azm; Clemens Reichel; Salam al-Quntar; Lamya Khalidi; Carrie Hritz; Mark Altaweel; Colleen Coyle; Carlo Colantoni; Jonathan Tenny; Ghassan A. Aziz; and Tobin Hartnell

2002 "Hamoukar: A Summary of Three Seasons of Excavation." *Akkadica* 123: 11–34.

Hall, Henry R., and C. Leonard Woolley

1927 Ur Excavations 1: *Al-'Ubaid*. Oxford: University Press.

Hole, Frank

1977 *Studies in the Archeological History of the Deh Luran Plain: Excavation of Chagha Sefid*. Memoirs of the Museum of Anthropology 9. Ann Arbor: University of Michigan.

Huot, Jean-Louis, editor

1996 *Oueili: Travaux de 1987 et 1989*. Paris. Éditions recherches sur les civilisations.

Lees, G. M., and N. L. Falcon

1952 "The Geographical History of the Mesopotamian Plain." *Geographical Journal* 118: 24–39.

Lloyd, Seton

1947 *Foundations in the Dust*. Oxford: Oxford University Press.

McMahon, Augusta, and Joan Oates

2007 "Excavations at Tell Brak 2006–2007." *Iraq* 69: 145–71.

Oates (Lines), Joan

1953 The Al Ubaid Period in Mesopotamia. Ph.D. dissertation, University of Cambridge.

Oates, Joan

1983 "Ubaid Mesopotamia Reconsidered." In *The Hilly Flanks and Beyond: Essays in the Prehistory of Southwestern Asia Presented to Robert J. Braidwood, November l5, 1982*, edited by T. C. Young, P. E. L. Smith, and P. Mortensen, pp. 251–81. Studies in Ancient Oriental Civilization 36. Chicago: The Oriental Institute.

2004 "Ubaid Mesopotamia Revisited." In *From Handaxe to Khan: Essays Presented to Peder Mortensen on the Occasion of his 70th Birthday*, edited by K. von Folsach, H. Thrane, and I. Thuesen, pp. 87–104. Aarhus: Aarhus University Press.

2005 "Archaeology in Mesopotamia: Digging Deeper at Tell Brak." *Proceedings of the British Academy* 131: 1–39.

Oates, Joan; Augusta McMahon; Philip Karsgaard; Salam al-Quntar; and Jason A. Ur

2007 "Early Mesopotamian Urbanism: A New View from the North." *Antiquity* 81: 585–600.

Oates, Joan, and David Oates

2004 "The Role of Exchange Relations in the Origins of Mesopotamian Civilization." In *Explaining Social Change: Studies in Honour of Colin Renfrew*, edited by J. F. Cherry, C. Scarre, and S. J. Shennan, pp. 177–92. McDonald Institute Monograph. Cambridge: McDonald Institute for Archaeological Research, University of Cambridge.

Pournelle, Jennifer R.

2003 Marshland of Cities: Deltaic Landscapes and the Evolution of Early Mesopotamian Civilization. Ph.D. dissertation, University of California, San Diego.

Rothman, Mitchell S., editor

2001 *Uruk Mesopotamia and Its Neighbors: Cross-Cultural Interactions in the Era of State Formation*. School of American Research Advanced Seminar Series. Santa Fe: School of American Research Press.

Safar, Fuad; Mohamed A. Mustafa; and Seton Lloyd

1981 *Eridu*. Baghdad: Ministry of Culture and Information.

Stein, Gil J.

2002 "From Passive Periphery to Active Agents: Emerging Perspectives in the Archaeology of Interregional Interaction." *American Anthropologist* 104: 903–16.

oi.uchicago.edu

4

THE HALAF-UBAID TRANSITION: A TRANSFORMATION WITHOUT A CENTER?

PHILIP KARSGAARD, *University of Edinburgh*

INTRODUCTION

The nature of inter-regional interaction between pre-state societies is one of recurrent concern to prehistorians, particularly in attempts to explain changes or developments in material culture and sociopolitical complexity. One prevalent feature of reconstructions of these interactions has been asymmetry, most obviously in studies positing a "core-periphery" relationship. Such interpretations of relationships between societies or communities are commonly based on a reformulation of Wallerstein's world systems model, in which (very briefly stated) technologically and politically sophisticated cores are able to dominate and exploit peripheral regions, often stimulating a short-lived and secondary sociopolitical development in these peripheral areas.

Notions of asymmetry, however, are not confined to core-periphery formulations; changes in material culture are held to be primarily exogamous in those accounts that highlight diffusion, the movement of peoples, or acculturation as major causal factors in perceptible changes in the archaeological record. Such conceptions have been extremely influential in southwest Asian prehistory, discussed briefly below. This paper, in contrast, attempts to demonstrate that the asymmetry of inter-regional relations in Mesopotamian prehistory may be a construct of our culture-historical and type-site approaches to the archaeological evidence. It should be demonstrated rather than, as it now often is, assumed. Rather than taking for granted the reality of discrete loci in which social, cultural, political, and technological innovation occurred first and thereafter spread to outlying areas, this paper draws on approaches that emphasize the ability of interactions among "peers" (in Renfrew's phrase) to stimulate social changes that occur more or less simultaneously over a wider region and which cannot easily be said to have an identifiable core. These are, therefore, transformations without a center.

The transformations under consideration here comprise, in part, the so-called Halaf-Ubaid transitional period in northern Mesopotamia, but also include similar developments in southern Mesopotamia in the latter part of the Ubaid sequence there. In what follows I concentrate almost wholly on the ceramic evidence for this transformation. Ceramics are useful in this analysis not only because of their ubiquity, but also because they have played a prominent role in previous reconstructions. Furthermore, ceramics — particularly the handmade, decorated vessels considered here — are intimately involved in the creation, negotiation, and contestation of identities, social norms, the construction of personhood and prestige, and the exercise of social and economic control: a characteristic they share with all material culture that is "meaningfully constituted" (Gell 1998; Hodder 1982; Nieuwenhuyse 2007; Wengrow 2001). Thus, they are meaningful in ways that are not reducible to their being epiphenomena of their particular technologies of manufacture, such as the slow wheel (Nissen 1988; 1989; 2001).

MESOPOTAMIAN TRANSFORMATIONS

During the Halaf-Ubaid Transitional period, elements of southern Mesopotamian material culture are held to have spread to northern Mesopotamia and as far as the Mediterranean coast as well as western Iran (Weeks, Petrie, and Potts this volume). In the fifth millennium B.C., a wide area of greater Mesopotamia appeared to be sharing cultural traits in common, especially the mainly black-on-buff painted ceramics, which, however, display elements of regional variation (Oates 1983). The meaning of this apparent similarity has been extensively debated, but what

oi.uchicago.edu

is striking about research into the Ubaid "expansion" is the near-universal assumption that the social, material, and technological innovations involved had their origin in southern alluvial Mesopotamia and spread outward from this core area. For example, although instances like the appearance of northern Ubaid material culture at the site of Tell Arpachiyah in northern Iraq above levels characterized as Halaf are now rarely attributed to ethnic change, as they were by the site's excavator (Mallowan and Rose 1935), some scholars consider, rather more carefully of course, that southerners may have moved north from the alluvium, perhaps in small numbers (e.g., Artzt 2001; Frangipane 2001: 321; Hole 2000; Thuesen 2000; for theoretical background, see, e.g., Ammerman and Cavalli-Sforza 1979; Antony 1990; 1992; papers in Chapman and Hamerow 1997). Such interpretations are the descendants of assumptions that every shift in ceramic culture from Hassuna to Halaf to Ubaid to Uruk represented the influx of new peoples (e.g., Mallowan 1966; Lloyd and Safar 1945; Safar, Mustafa, and Lloyd 1981), a consequence of using Childe's early definition of the culture group:

> We find certain types of remains — pots, implements, ornaments, burial sites, house forms — constantly recurring together. Such a complex of regularly associated traits we shall term a "cultural group" or just a "culture." We assume that such a complex is the material expression of what today would be called a people. In such cases of the total and bodily transference of a complete culture from one place to another we think ourselves justified in assuming a "movement of people" (Childe 1929: v–vi).

The framing of relations between northern and southern Mesopotamia as one of asymmetry may also be due in part to the recent work done on the fourth millennium and the Uruk phenomenon. Most forcefully argued by Algaze (1989; 1993; 2001a; 2001b; 2005), this interpretation of inter-regional relations focuses on the ability of south Mesopotamian polities to implant trading colonies in a northern periphery and highlights in particular the disparity in development between the societies of the southern alluvium and those in the dry-farming north. Algaze's suggestions have stimulated a great deal of research into fourth-millennium interactions and, while some deny any developmental disparity between regions, others tend to view fifth-millennium relations as a precursor — including a developmental gulf between southern Ubaid society and northern Halaf ones (Breniquet 1996; Frangipane 2001: 322; Oates 1993).

A reaction to this southern Mesopotamian bias has been a welcome focus on the local nature of development and change in Ubaid-period sites in north Mesopotamia and Syro-Anatolia. Most influentially, perhaps, Catherine Breniquet attempted to explain the northern Ubaid as a local, very late Halaf phenomenon and drew on Leroi-Gourhan's (1973) theories of acculturation — that adoptions of foreign cultural elements are always adaptations — to explain the emergence of the northern Ubaid (Breniquet 1989; 1996). The Halaf-Ubaid Transitional material, excavated at sites like Aqab (Davidson and Watkins 1981) and recognized at Chagar Bazar, Tepe Gawra, and Mefesh (Breniquet 1987; 1989; 1996; Copeland and Hours 1987; Davidson 1977; Mallowan 1946; 1947: 1–80; Tobler 1950; Watkins and Campbell 1987) was seen as representative of this process of acculturation. Such a model of acculturation was necessary because, although researchers wished to demonstrate the local autonomy of northern communities and deny, insofar as possible, southern primacy, what are still apparent are the similarities between the northern and southern assemblages adumbrated long ago by Perkins (1949: 90–96). For those who emphasize the northern and local nature of the northern Ubaid, the apparently southern features of a northern assemblage become something of a problem and must be accounted for. Scholars often explicitly or implicitly frame this influence in terms of elites' desires to emulate non-local behavior in order to gain prestige (which goes beyond ceramic styles: Stein [1994] proposed the spread of a style of political economy from the south to the north), especially on the "fringes" of the Ubaid world, as, for example, at Hammam et-Turkman (Akkermans 1988: 112–13).

The assumption that "emergent elites" will always "emulate" foreign (i.e., southern) goods in order to show how elite they are and will acculturate to further maximize their bases of power, appears often. This emulation presumably derives from deficiencies in Halaf social, economic, or political systems and the superiority of the Ubaid chiefly form, though this is rarely explicitly addressed. In these cases, then, the prestige of emergent elites seems to function in a sort of ahistorical, cross-cultural way; emergent elites will always want to look like their (more sophisticated?) neighbors and will always copy their neighbors' pottery in order to do so. We may do damage, in this way of working, to the concepts we are considering. Such terms become like cross-cultural laws of behavior that all prehistoric societies follow. Apply the word and, it seems, you have applied an explanation; but, as the word is applied more frequently to more and more cases (each of which differs slightly) the terms of reference of the word become wider and wider, until we are left with a large box of meanings and examples which explains just about any habit of elites or any instance of similarity.

oi.uchicago.edu

Dan Sperber has pointed out the ways in which this process has occurred generally in anthropology. Terms, he says, are used interpretively, rather than descriptively, and although there is a sort of family resemblance among their meanings, "the resemblance involved is a resemblance in meaning among all the notions rendered by means of the term, rather than a resemblance among the things referred to by these terms" (1996: 17). Further, Douglas and Isherwood (1996) have reminded us of the particularity of prestige, in that it appears to be socially embedded and can refer to a whole host of claimed qualities, not the least of which might be reticence or the lack of vulgar display, for example. Therefore, we need to guard against our terms becoming too baggy, too much the same in all cases, and hence devoid of much particular meaning.

I would like to highlight a few theoretical difficulties with notions of acculturation specifically. Ironically, although acculturation was proposed in part to emphasize local northern agency by highlighting that adoptions are always adaptations, it in fact tends to create a strong sense of tension between local and foreign elements in material culture assemblages. An early formulation of acculturation, which still seems to be the basis of our understanding of Halaf-Ubaid interaction, defines it as "culture change that is initiated by the conjunction of two or more autonomous local systems" (Broom et al. 1954: 974). Much of the effort of recent postcolonial theory has been aimed at an attempt to fill out the responses of receptor cultures (e.g., Stein 2002), as well as undermine the status as an independent variable of the donor culture. What is left less examined, of course, is the reality of two independent cultures interacting, because, in colonial encounters, such a reality is obvious and marked. In dealing with prehistoric "cultures," however, this reality of two distinct, interacting entities is just what is in doubt. Thirty or so years ago, Renfrew (1977) warned of the dangers of the type-site approach to creating culture-history, more recently underlined again by Stuart Campbell (1999). Our artifactually defined cultures are probably no more than the product of our selection of type sites. Despite this repeated insight (e.g., Akkermans and Schwartz 2003: 157–58, with references; Oates 1987: 168), we seem still to treat the Halaf and Ubaid as autonomous cultures which behaved as historical actors, interacting with, influencing, and borrowing from each other. Any notion of "polythetic" distributions (Clarke 1968) seems to have had little impact on our interpretations. Reliance on acculturation, therefore, has the effect of reifying two culture groups which may not exist. In the end, acculturation — whether or not adopted traits are adapted — locates developmental primacy in southern Mesopotamia as much as straightforward Childean diffusion would do.

It may be, then, that the perceived asymmetry between northern and southern Mesopotamia arises out of these very constructions of the Ubaid as a culture-historical entity, and it is worthwhile to consider further the roots of our inherited terminology. For southern Mesopotamia, Joan Oates proposed in her 1960 publication that the material uncovered in the earliest strata at Eridu, called by its excavators "Eridu" and "Hajji Muhammad" material (Safar, Mustafa, and Lloyd 1981), were properly to be considered part of the same cultural complex, and suggested naming these Ubaid 1 and 2. This was in the context of a particular research question at the time, the so-called Sumerian Problem, which was concerned with pinpointing the exact point of entry onto the historical stage of those people responsible for the civilization and monuments of third-millennium Sumer (Oates 1960; 2004; this volume). Oates' aim then was to emphasize that the Eridu sequence did not need the influx of new peoples at the end of the Hajji Muhammad phase to explain the emergence of what we would now call the later Ubaid 3 and 4 material, a conclusion which manifestly still holds. But the success of this observation, and the way in which it has been used, has also served to flatten some distinctions within that sequence. I would like to highlight, and place within their interregional context, some of these distinctions or differences. I should make it clear, however, that I am not suggesting a reversion to the labels of "Eridu" and "Hajji Muhammad"; as noted, Oates' conclusions were correct in their emphasis on a gradually developing sequence which should not be interpreted as due to influxes of new ethnic groups.

Northern Mesopotamia, by contrast, has benefited from no such unifying terminology; there, the very terms "Halaf," succeeded by "northern Ubaid," serve to underline the disjunctions in cultural development in those regions outwith southern Mesopotamia. With our present culture-history, then, we are left with a coherent, gradual, and endogenous sequence of development in the south — "Ubaid 0–5" — and a disjunctive sequence in the north — Halaf-Ubaid. I would like to propose a slightly different slicing of the cultural-historical pie, and do so by inquiring into the nature of the ceramic assemblages that are characteristic of these two sequences. In dealing with symbolic systems of any sort, Howard Morphy (1989) has urged that we inquire not so much what symbols meant, as how they operated in a social system and how they were used; this is briefly attempted below.

One aspect of both Halaf and early southern Ubaid assemblages is their high proportion of painted vessels in a given assemblage, including, often, shallow plates with all-over decoration (fig. 4.1). Other forms have broad, flaring rims, are highly decorated, or are characterized by all-over decoration. The particular patterns clearly differ.

oi.uchicago.edu

Traditional cultural-historical approaches emphasize these differences in motif choice, uses of symmetry, the different ways of generating patterns, as well as particularities of form. But I suggest that these decorative schemes were functionally similar, serving perhaps to emphasize cosmologies in contexts of consumption, as Wengrow (2001) and Campbell (2000) have discussed. That is, these highly decorated, open vessels seem to be engaged in social acts of consumption. Flat bases, out-flaring sides, shallowness, and interior decoration and burnishing are formal features of vessels that have been identified in other contexts as related to the serving and consumption of food (e.g., Lesure 1998). I have in mind not so much those daily, routine acts of commensality addressed by Pollock (this volume), but rather more "formal social rituals" (Campbell 2000: 10) in which social relationships may be confirmed, negotiated, claimed, or repaired, and in which commodities may have been exchanged: what Hayden (2001: 55–58) has called promotional feasts, or perhaps even competitive feasts, and Dietler (2001: 76ff.), empowerment feasts. It is these sorts of feasts which require particular, often exotic, paraphernalia and are central loci for the contestation of social status, influence, and relationships with inter- and intra-community exchange partners and affines. Feasting has been the object of a great deal of anthropological and archaeological attention lately, and the Middle/Late Halaf decorative ebullience has been attributed to the requirements of the feast (Nieuwenhuyse 2007). Less noticed is that southern Ubaid assemblages display the same characteristics, and, I submit, are the results of similar human behaviors.

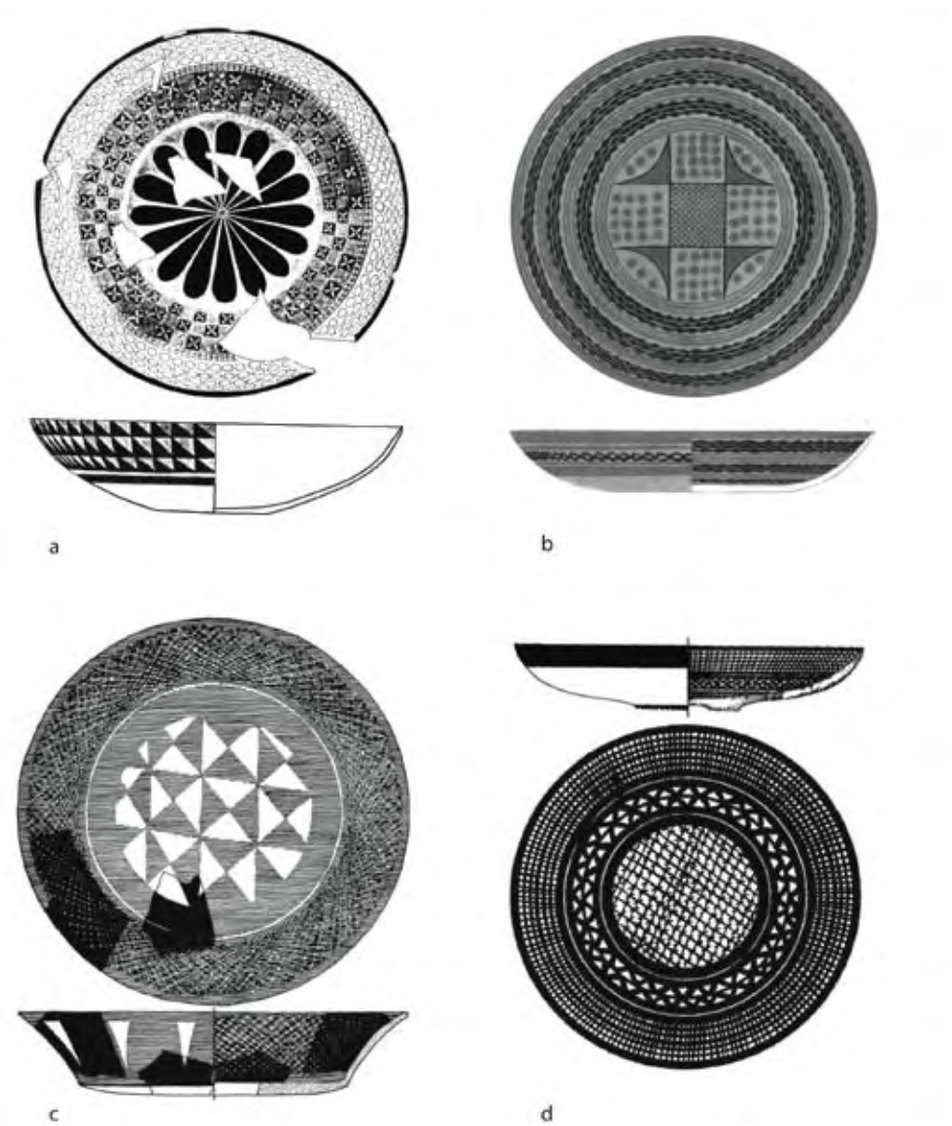


Figure 4.1. Highly decorated, open forms from both Halaf and earlier southern Ubaid contexts. (*a–b*) Late Halaf polychrome vessels from the TT6 Burnt House, Arpachiyah (after Mallowan and Rose 1935: pls. 15, 18). (*c*) Ubaid 2 vessel from Hajji Muhammad (after Ziegler 1953: pl. 14). (*d*) Ubaid 1 vessel, Eridu 16 (after Safar, Mustafa, and Lloyd 1981). Not to scale

oi.uchicago.edu

The elaborate bi- and polychrome vessels of the Late Halaf, in particular, have often been (over)emphasized as a salient characteristic of the Halaf "culture." Much of the assemblage is made up of more mundane vessels, and some smaller Halaf sites seem to lack the full range of these vessels (at, e.g., Kharabeh Shattani: Watkins and Campbell 1986). These characteristics go further to underline their function as symbolic markers and framers of ritualized, set-apart occasions, and suggest that feasting events were an important, and partially restricted, locus for the negotiation and exercise of social status and, incidentally, exchange and economic control. For instance, Stuart Campbell's (2000) analysis of the Burnt House at Tell Arpachiyah suggests that the remarkable, highly decorated portion of the assemblage there was used only rarely, in periodic feasts, while other parts of the assemblage seem to be related to more mundane, daily consumption. The Burnt House was also filled with exotic goods and artifacts associated with ownership and control, such as seals and sealings (Mallowan and Rose 1935; Campbell 2000).

Similarly, a distinctive feature of early southern Ubaid assemblages are shallow, flaring plates, highly decorated on their interior (Ziegler 1953; Stronach 1961; Crawford this volume; fig. 4.1c–d). As an "add-on" to the rest of the assemblage, this distinctive form seems equally plausible as a marker of individualizing status associated with non-routine, ritualized social events involving food and drink.

This broader view, stepping away from exact compositional elements, motif choices, and designs, allows us, I think, to perceive cross-cutting cultural similarities which point toward similar systems of social control and even "scale," which take us beyond the culture-historical groups we have generated from our type-site approaches. Therefore, considering the ways in which Late Halaf and early southern Ubaid ceramic assemblages were used, I would broadly equate these two "cultures." In this sense, they have more in common with each other than their differences in motif choices might suggest; and, furthermore, they both share qualities that differ from the succeeding period.

SALIENT FEATURES OF FIFTH-MILLENNIUM B.C. SOCIAL TRANSFORMATIONS

The deconstruction of the culture-history approach need not be simply negative. It allows identification of some of the salient aspects of the social transformations — and the human behaviors underlying them — which are characteristic of both the Halaf-Ubaid transition in the north and, crucially, the transition between roughly the Ubaid 0–2/3 and 4 in the south. There are two main changes in ceramic repertoires across Mesopotamia: an increasing plainness of vessels, and an increase in the proportion of closed forms. The first is the process that David Wengrow (2001) has dubbed the "evolution of simplicity," the change from highly decorated open forms to both a simplicity of design and a reduction of painted space on individual vessels, as well as the number of painted vessels in a given assemblage. This increasing plainness is visible across greater Mesopotamia through time, as both fewer vessels are painted and less body surface on each vessel is painted. This trend is clearly visible at Tell al-'Abr on the Euphrates (fig. 4.2a) as well as at Eridu in lower Mesopotamia (fig. 4.2b); see also Thuesen's (2000: 75, fig. 3) graph of northern material from Tell Mashnaqa, Tell Leilan, and Hammam et-Turkman. An increasing degree of simplicity and plainness in the ceramic repertoire also means that these assemblages are increasingly homogeneous. This homogeneity is visible at an intra-site level, most particularly, but also pan-regionally. Nissen (1988: 46–48; 61–63; 1989: 248–49; 2001: 168–69)

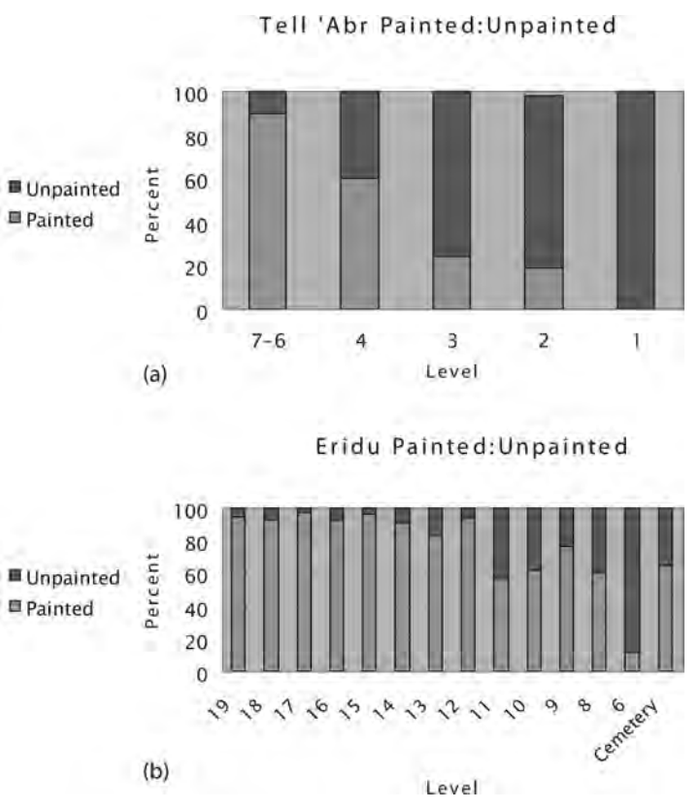


Figure 4.2. Increasingly plain assemblages from Mesopotamia. (*a*) After data from Tell el-'Abr (Hammade and Yamazaki 2006). (*b*) After data from Eridu (Safar, Mustafa, and Lloyd 1981)

oi.uchicago.edu

has argued that these changes result primarily from the introduction of a new technological device for the manufacture of pottery, the slow wheel (*tournette*), an explanation that clearly simplifies more complex processes of symbolic reproduction. However, what Nissen has also emphasized is that this pan-regional adoption of technologies (as well as house styles: Nissen 2001: 170ff.) indicates both the interactions occurring across Mesopotamia and that these interactions must have been symmetrical for them to have been adopted contemporaneously. He argues, then, that the underlying social and economic forms of societies across Mesopotamia were similar and attempting to solve similar "problems" of production and, I would add, social relations in increasingly large and nucleated settlements (see below). The adoption of the tournette, then, should be placed in its context of social change (Wengrow 2001: 181), which I attempt briefly below.

The transformation of the ceramic repertoire is, I think, indicative of a profound transformation in social structure, interaction, identity, and behavior and forms the heart of the "Ubaidizing" transformation. If both the Halaf and Ubaid 0–2 assemblages are well placed to form part of a system of socially important consumption or feasting, as we saw above, then the Ubaid 3–4 and northern Ubaid assemblages appear to be part of a system of a different sort. We no longer find the distinctive, open, shallow, and highly decorated vessels of the previous period. Instead, as well as being increasingly simple, later Ubaid handmade vessels can be more or less identical in their designs in ways that a particular subset of symbolically important southern Ubaid 0–2 and Halaf handmade vessels are not. Patterns — crosshatching, wavy lines, pendant swags — are repeated essentially unaltered on many later Ubaid vessels (fig. 4.3); whereas the Halaf and earlier southern Ubaid shallow open forms, at least, although clearly using a socially sanctioned set of motifs, generate individual patterns which generally do not reoccur on more than one vessel of that type (Wengrow 2001). Agreeing with Alfred Gell (1998) that material culture can act as an extension of persons, it seems that individuals and their roles were constructed quite differently in these two systems; on the one hand, determinedly individualizing and different, and on the other, conventionalized, repeated, homogeneous. A shift has occurred in the symbolic reference of decorated pottery, from the individual presence so powerfully put forward by the Tell Arpachiyah Burnt House assemblage, for instance, to the conformist identity of Ubaid pottery, in which the particular individual appears to have been submerged into a larger shared identity. The designs on Ubaid pots, therefore, appear to refer primarily to the community identity, rather than the individual user or maker. This also points to a difference in the construction of prestige, a difference apparently borne out by the rather flattening or egaliterianizing mortuary evidence of the Ubaid cemeteries as well as the Ubaid emphasis on monumental architecture rather than individual wealth (Wright and Pollock 1986; Forest 1983: 114; Hole 1989).

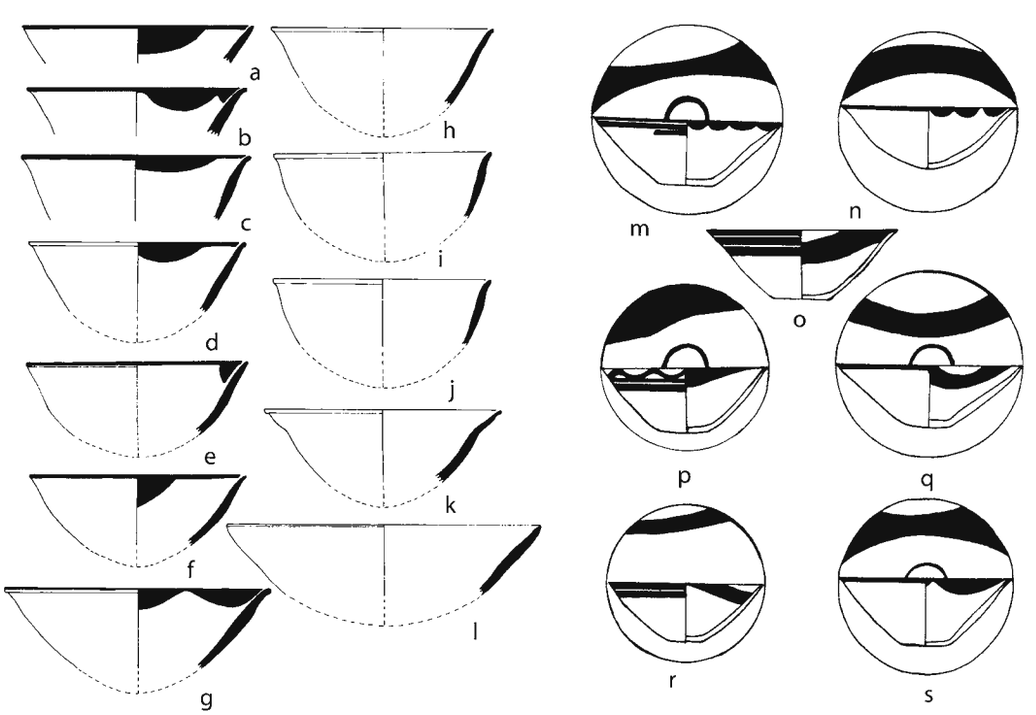


Figure 4.3. Later Ubaid ceramics, characterized by repeated rather than individualizing motifs. (*a*)–(*l*) Simple bowls from Tell al-'Abr 6 (after Hammade and Yamazaki 2006: pl. 6.47); (*m*)–(*s*) Flaring bowls from Tell Abada (after Jasim 1985)

oi.uchicago.edu

The second main change in ceramic repertoires, the trend away from open shapes toward more closed ones, is part of this same transformation. The open, shallow, and highly decorated shapes of the Late Halaf and southern Ubaid 0–2/3 are no longer being made and used. Even those shallow forms which do continue into the Ubaid period are simply decorated (fig. 4.3). What later Ubaid assemblages across Mesopotamia seem most suited to is a system in which emphasis has been placed on daily, mundane acts of commensality. Commensal practices clearly varied across later Ubaid-period Mesopotamia (Pollock this volume). These commensal events are no less powerful than feasts, but serve to underline not individual status, prestige, and other social qualities, but the participants' inclusion in a communal, community-based identity, in which differences in ceramic vessels are not marked out, but rather similarities are underscored in the repeated and unaltered decorations on every participant's bowl. These assemblages appear to foster social solidarity, then, rather than to mark status differentials among individuals. The central hall of tripartite houses with its central hearth, a feature of many Ubaid sites, seems to be the natural locus for such routine commensal events in which social norms are replicated (or contested). One of the most coherent such assemblages comes from the level 2 house at Tell Madhhur in the Hamrin (Roaf 1984; 1989). In contrast to earlier Halaf and Ubaid 2 assemblages, the vessels in this house most obviously associated with consumption are restricted to a range of very simple shapes, "shallow" and "medium bowls" (Roaf 1989: 107ff.). The small and medium shallow bowls (which, despite their name may be near hemispherical and are deeper relative to diameter than the Halaf vessels mentioned above: cf. Roaf 1989: fig. 3), suitable for individual portions of food or drink, are undecorated. Of the range of medium bowls, those that come from the central hall with its hearth are painted with "similar though not identical decoration and might have been part of an almost matching set" (Roaf 1989: figs. 3 and 4; 108). Such simple bowls with repeating patterns are a common feature across Ubaid Mesopotamia: see also, for example, the levels 7 and 6 sinuous-sided deep bowls from Tell al-'Abr on the Syrian Euphrates, decorated with a restricted range of cross-hatch motifs repeated across many vessels (Hammade and Yamazaki 2006), a feature partially due to contextual factors in a pottery production area but which underlines the repeated nature of designs on the most common form there. These assemblages hint at individual servings in a communal household context. This shift away from individual patterning to vessels symbolically coded with referents to the household and community may have been increasingly important in the increasingly large, increasingly dense, and increasingly long-lived settlements of the Ubaid period (see below), serving to flatten the competing claims of individual characteristics in ever more densely occupied settlements, and thereby making easier these sorts of novel, intense dwellings-together. Any feasting which did occur in Ubaid Mesopotamia (see, e.g., Helwing 2003a; 2003b) were likely to be centered on social solidarity and on "work feasts" which do not require the sorts of marked-out, special ceramics and exotic paraphernalia which characterize the earlier, individualizing events.

What is important to note is that this transformation is applicable equally to the transformation from (southern) Ubaid 0–2 to Ubaid 3–4 as it is to Halaf to early northern Ubaid assemblages. The salient features of increasing plainness, increasing homogeneity, and a trend from open to closed forms apply to both regions. Where, then, did this occur first?

A SOUTHERN INNOVATION?

In terms of the two salient transformations outlined above, the chronological primacy of one particular region seems difficult to establish. Stylistic comparisons often assume that stylistic similarity equates with contemporaneity, and to this untested assumption is added the further assumption that the style must have come from southern Mesopotamia first: that is, after all, where the "Ubaid" originated! As outlined above, these assumptions have more to do with our inherited terminologies and the contingent histories of excavation in the two regions than a proved developmental gulf between the two regions.

Our absolute chronologies, moreover, may not help. The state of our radiocarbon determinations means that our sample sizes are so small (once unacceptable single dates and inappropriate samples have been excluded) that any chronological disparities between widely flung regions remain statistically rather insignificant (e.g., Watkins and Campbell 1987). It is interesting to note, however, that one of the most rigorous and recent dating strategies, from Domuztepe in Turkey, has produced dates for assemblages apparently typologically indistinguishable from the Halaf-Ubaid transition which are far earlier than that predicted for a model of Ubaid diffusion from southern Mesopotamia (Campbell this volume). Indeed, the case of Domuztepe illustrates how ceramics apparently typologically

oi.uchicago.edu

attributable to the Halaf-Ubaid transition and northern "Ubaid-related" emerge rather from local ceramic development at a site tied into, in this case, both Levantine and north Mesopotamian networks (Irving 2001; Campbell et al. 1999). The Halaf-Ubaid transition, it seems, is longer and considerably more complex than the gradual flow of southern Mesopotamian influences up the riverine routes to northern sites.

Further evidence of clear southern Mesopotamian developmental primacy in the fifth millennium appears to be slim. For instance, the use of record-keeping paraphernalia, "memory tools" (Costello 2000), tokens, seals, and sealings — necessary tools in increasingly complex economies — is well attested in northern Mesopotamia from very early times (Akkermans and Duistermaat 1997; Jasim and Oates 1986; Oates 1996) continuing into the Ubaid period. The southern evidence is the most sparse, perhaps due only to a smaller sample there. The emergence of apparently specialized ritual or public architecture in southern Mesopotamia can be most securely identified at Eridu VI: not definitively earlier than, for example, Tepe Gawra XIII in the north (Safar, Mustafa, and Lloyd 1981; Tobler 1950).

Such Ubaid "temple-towns" may indeed have been an important part of the emergence of complex settlement patterns and the eventual emergence of urban forms. They have been seen as peculiar to southern Mesopotamia. The lower alluvium's settlement patterns, the object of seminal survey work in the Near East, vary somewhat, but in general have revealed hierarchical settlement patterns around central sites of around 10 ha (Adams 1965; 1981; Adams and Nissen 1972: 11; Wright 1981). Despite difficulties of alluviation masking early settlements, attempts have been made to calculate general population densities across Mesopotamia. A comparison of these data with intensive surveys in northern Mesopotamia (Wilkinson 2000a) shows that the southern alluvium may, however, have been more sparsely settled in the fifth millennium than the dry-farming northern Jazira (Wilkinson and Tucker 1995). The North Jazira Survey Project also revealed the clearly primate settlement systems in the Ubaid period, centered around an about 15–20 ha Tell al-Hawa (Ball, Tucker, and Wilkinson 1989; Ball 1990; Wilkinson, Monahan, and Tucker 1996). New data from around Tell Brak is beginning to suggest this density of settlement is not an isolated phenomenon (Oates 2005; Karsgaard 2006). Figure 4.4 shows calculations of the amount of area in sq. km per site found for several survey areas in both lower and upper Mesopotamia and includes preliminary data from the Brak

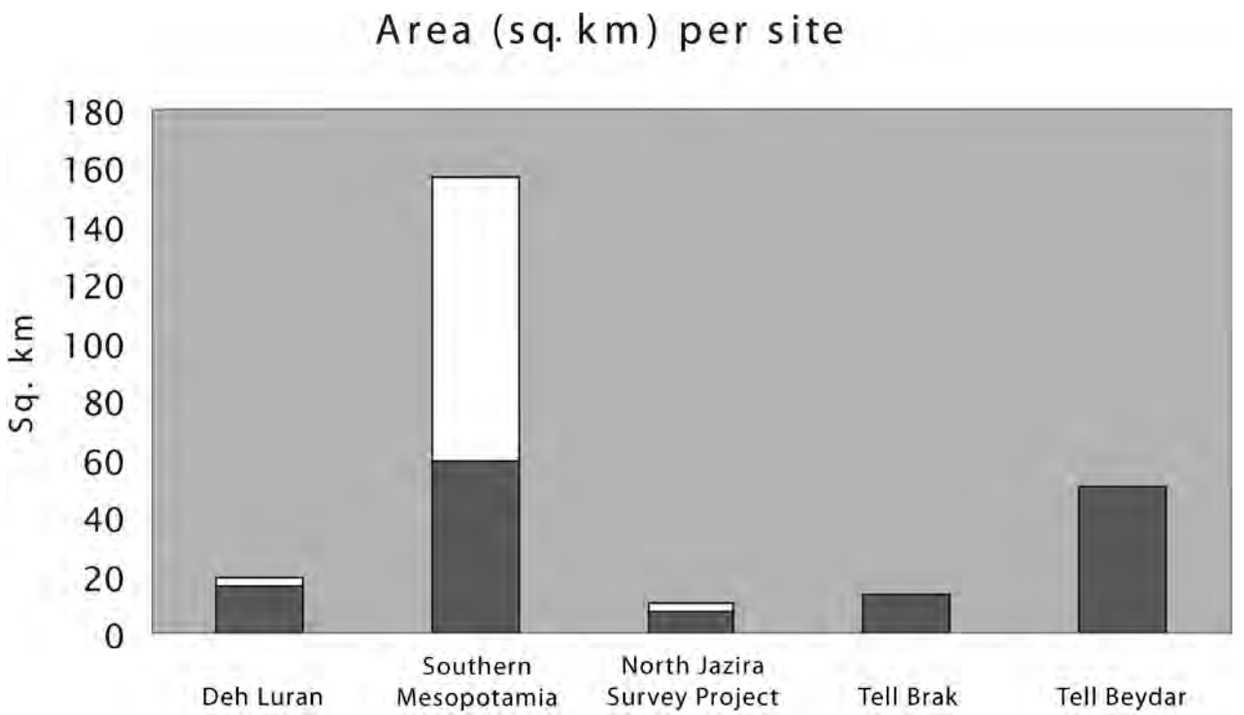


Figure 4.4. Comparative Mesopotamian settlement data: graph of area in sq. km per site for the Ubaid period by region. Filled areas of histogram bars represent maximum calculated settlement densities, unfilled areas minimum settlement densities. Deh Luran: data after Hole 1987; Southern Mesopotamia: Oates 1980, cited in Wilkinson 2000a: 244; North Jazira Survey Project in northern Iraq, after Wilkinson and Tucker 1995; Tell Brak: unpublished data from the Brak Sustaining Area Survey for settlement in a 15 km radius from Brak; Tell Beydar: data from 12 km radius around Tell Beydar, Syria, after data in Wilkinson 2000b

oi.uchicago.edu

Sustaining Area Survey. This graph indicates that for the area around Tell Beydar, for instance, there is one site found for every 50 sq. km; by contrast, the southern alluvium has site densities as sparse as one site for every 157 sq. km. Both Adams and Nissen's (1972) and Pournelle's (2003) work indicate that in some areas of lower Mesopotamia this scarcity of settlement is not entirely due to the problems of alluviation. Similar surveys in the Balikh Valley in northern Syria show an expansion (southward) of settlement in the Ubaid period which has its beginnings in the final Halaf phase there, suggesting that local trends in settlement development are responsible for the emergence of larger, more nucleated sites in the Ubaid period (Akkermans 1993: 138–91; Wilkinson 1998; Artzt 2001: 266–71). As survey evidence for northern Mesopotamia increases in detail, it appears that population in the fifth millennium may have been relatively more dense in the north than in the southern alluvium.

It is not the intention of this paper, however, to make a case for northern Mesopotamia as developmentally superior to the south. Such an attempt would be an error of the same sort as privileging the south. Nor should purely local, endogamous development be over-emphasized. Rather, both symmetry and inter-relations are crucial elements of the transformations underway in both regions.

I have tried to show that, setting aside for a moment the particulars of motif choice and design, Halaf and earlier southern Ubaid ceramic assemblages have cross-cutting similarities that point toward similarities of social scale and perhaps similarities in social engagement and the role of the individual. I indicate that the shift from this earlier period to the later one of the northern Ubaid and Ubaid 3–4 in the south represents a transformation of a similar sort which is visible in the ceramic repertoire as an "evolution of simplicity." What I would like to underline is that this transformation appears to be as novel and as local in southern Mesopotamia as in northern Mesopotamia, and that we are therefore unable to pinpoint the center of this set of transformations.

I note above that our traditional understanding of the Ubaid phenomenon is unidirectional, the result of influence from southern Mesopotamia, if not the movement of peoples. An influence is often conceived as a vector, a straight line, an arrow extending from one specific point to another. Unfortunately, in terms of cultural influences, this arrow is not depicting the flow of, for example, resources or caravan routes; it is, rather, a metaphor for the flow of ideas. Culture is, "first and foremost" made up of contagious ideas (Sperber 1996). Thus the arrow is a geographical metaphor for mental processes, and that is where the analogy breaks down. We assume that the arrow, or influence, comes from a single point; has, therefore, a single referent; and is furthermore going to a single point. This works well for caravan routes but less well, and too simplistically, for mental processes. It is not easy to define the single reference point of a culture. It is not a place or a monument or a pottery form. The Ubaid culture did not live in the Temple VI of Eridu, to be taken out and compared with other material manifestations that bear more or less similarity to it. Culture, then, is not a thing, and has no single referent. It can be thought of as a series of actions, thoughts, and representations, both public (such as utterances, material objects, painted ceramics, houses, chipped stone) and private (internal thoughts, beliefs, intentions). These public and private representations, material and mental, are locked into a cycle of influence and re-influence, a cycle in which, for the most part, it is difficult to pinpoint beginnings or endings. Furthermore, these representations tend to be rather unstable: each public, material representation is likely to differ slightly from any other. As Sperber notes, "representations are transformed almost every time they are transmitted, and remain stable only in certain limiting cases" (Sperber 1996: 25; cf., e.g., Mithen 1999 for the "anchoring" effects of material representations). If this is the case, then culture is not a neat package which can be exported wholesale and unaffected (as Binford's [1962] critique drew attention to years ago). It is this lack of referent to a single, overarching culture that makes the single, unidirectional arrow of influence unlikely and indeed an interpretative blunder.

This approach is a modest application of some implications from cognitive theory and is in line, too, with non-essentialist and post-processual interpretations of prehistoric interaction. It may well free us from some difficulties. Rather than having to pinpoint — and then argue away — specific "southern" and "northern" features of culture in the fifth millennium, we can see the creation of new culture(s) in the framework of intensive networking without having to concern ourselves with asymmetrical influences and the problems they create with cores and peripheries. Rather than becoming enmeshed in identifying local versus southern elements in the Ubaid material pottery repertoire, we should look at the Ubaid transformation as a whole — not as a northern phenomenon influenced by the south, but as a larger-scale transformation that could only have happened if the regions concerned were all in contact with each other. The development of the classic southern Ubaid material may be seen as equally the result of interactions with the north (and not only as an outcome of purely pristine development), as are the Ubaid transformations that seem to be happening at other sites across northern Mesopotamia. They are both co-equal in the way that something new is being created and recreated, and there is no primacy of continuity or non-continuity. The Ubaid phe-

oi.uchicago.edu

nomenon is the phenomenon that is created through a pan-regional outworking of networks and inter-connections arising over a broad area; it is no less this outcome in the south as it is in the north. The region "influences" itself into something new.

Multi-local transformations of this sort have been identified in other contexts, perhaps most influentially in Renfrew and colleagues' "peer-polity" interaction model (Renfrew and Cherry 1986). Similarly, Caldwell's (1964) interaction spheres have been applied to earlier cases in the Near East of apparently widely shared traits (Bar-Yosef and Belfer-Cohen 1989; cf. Yoffee 1993 and, in the New World, Blanton 1976; Freidel 1979). McCarthy (2003) has also explored some ramifications from cognitive theory and the natures of complex adaptive mechanisms in the later fourth millennium B.C. and highlights the multi-centric nature of the Uruk phenomenon between "more-or-less peers." Peer-polity and interaction spheres have a number of features in common, including an emphasis on elite activity and interaction in the generation of similarities. Peer-polity interaction is also explicitly concerned with increasing sociopolitical complexity, a developmental trajectory that is indeed often assumed for the Halaf-Ubaid transition and later Ubaid period, but perhaps less successfully demonstrated. Although welcome in the sense that these two models emphasize that an original locus of innovation often cannot be found, it seems less applicable in the transformations of household assemblages involved in the daily and mundane acts of commensality in which the vast majority of later Ubaid ceramics were used. However, I think the framework of transformations without an identifiable center is a useful one and can free us from some of the difficulties in explaining broad regional similarities and differences in material culture. A key factor remains that these transformations occur in a context of interaction, of interregional interaction, in which "influences" are not unidirectional, but occur along many different axes. The explanation of identities and their material-culture implications at a level beyond that of the co-resident group or site is a research problem that remains under-theorized (but see, e.g., Emberling and Yoffee 1999). Because of the drawbacks of the culture-history and type-site approaches, perhaps, archaeologists have turned to smaller scales of analysis, with an emphasis on agents and practice. The mechanics and reality of regional or pan-regional identities and their material correlates remain far less well understood, or investigated. One main area of research which may provide increasing insights into the mechanics of such long-distance interactions may come from network theory. In particular, it seems that, given a background of local systems of interacting agents, it takes only a very few long-distance connections in order to shorten considerably the average "distance" between communities. Such small-world (Watts and Strogatz 1998) and scale-free (Barabási and Albert 1999) networks, held together by a small number of crucial cross-cutting interacting agents, may help explain large areas of broad similarity even for prehistoric societies in which travel may have been infrequent, difficult, and time consuming. Much more work, and thinking, remains to be done in order to bring to this scale of interaction and identity the sorts of insights derived from thinking about the individual agent in prehistory.

I have tried to show, briefly, that our inheritance of particular bounded culture groups has masked some intriguing similarities between the Halaf and the Ubaid in the social function of their decorated ceramic assemblages; that the transformations in these assemblages appear to be similar in both regions and relate, ultimately, both to the mechanics of social control and more importantly, perhaps, to changes in the construction of identity; that our explanations of southern "influence" may require some re-examination; and that these social transformations cannot be primarily located in any one single region, but are rather best explained as transformations without a center.

ACKNOWLEDGMENTS

Many thanks to Robert Carter and Graham Philip for the opportunity to participate in the Durham conference out of which this paper arose; I am very grateful for a British Association for Near Eastern Archaeology (BANEA) Conference grant which helped me attend. Thanks to Joan Oates and Henry Wright for permission to use unpublished Tell Brak survey data. Robert Carter also commented on an earlier draft of this paper, as did Geoff Emberling, Andrew McCarthy, Joan Oates, and Eddie Peltenburg; I thank them and two anonymous referees for their valuable suggestions and insights. They may not agree with everything I have written, and any remaining errors are entirely my own.

oi.uchicago.edu

BIBLIOGRAPHY

Adams, Robert McC.

1965 *Land Behind Baghdad: A History of Settlement on the Diyala Plains*. Chicago: University of Chicago Press.

1981 *Heartland of Cities: Surveys of Ancient Settlement and Land Use on the Central Floodplain of the Euphrates*. Chicago: University of Chicago Press.

Adams, Robert McC., and Hans J. Nissen

1972 *The Uruk Countryside: The Natural Setting of Urban Societies*. Chicago: University of Chicago Press.

Akkermans, Peter M. M. G.

1988 "An Updated Chronology for the Northern Ubaid and Late Chalcolithic Periods in Syria: New Evidence from Tell Hammam et-Turkman." *Iraq* 50: 109–46.

1993 *Villages in the Steppe: Later Neolithic Settlement and Subsistence in the Balikh Valley, Northern Syria*. Archaeological Series 5. Ann Arbor: International Monographs in Prehistory.

Akkermans, Peter M. M. G., and K. Duistermaat

1997 "Of Storage and Nomads: The Sealings from Late Neolithic Sabi Abyad, Syria." *Paléorient* 22: 17–44.

Akkermans, Peter M. M. G., and Glenn M. Schwartz

2003 *The Archaeology of Syria: From Complex Hunter-Gatherers to Early Urban Societies (ca. 16,000–300 B.C.)*. Cambridge: Cambridge University Press.

Algaze, Guillermo

1989 "The Uruk Expansion: Cross-Cultural Exchange in Early Mesopotamian Civilization." *Current Anthropology* 30: 571–608.

1993 *The Uruk World System: The Dynamics of Expansion of Early Mesopotamian Civilization*. Chicago: University of Chicago Press.

2001a "The Prehistory of Imperialism: The Case of Uruk Period Mesopotamia." In *Uruk Mesopotamia and Its Neighbors: Cross-Cultural Interactions in the Era of State Formation*, edited by M. S. Rothman, pp. 27–83. Sante Fe: School of American Research Press.

2001b "Initial Social Complexity in Southwestern Asia: The Mesopotamian Advantage." *Current Anthropology* 42: 199–233.

2005 "The Sumerian Takeoff." Structure and Dynamics: eJournal of Anthropological and Related Science 1, article 2. http://repositories.cdlib.org/imbs/socdyn/sdeas/vol1/iss1/art2

Ammerman, A. J., and L. L. Cavalli-Sforza

1979 "The Wave of Advance Model for the Spread of Agriculture in Europe." In *Transformations: Mathematical Approaches to Culture Change*, edited by C. Renfrew and K. L. Cooke, pp. 275–94. New York: Academic Press.

Antony, D. W.

1990 "Migration in Archaeology: The Baby and the Bathwater." *American Anthropologist* 92: 895–914.

1992 "The Bath Refilled: Migration in Archaeology Again." *American Anthropologist* 94: 174–76.

Arzt, J. M.

2001 Excavations at Tell Ziyadeh, Syria: The Northern Ubaid Reconsidered. Ph.D. dissertation, Yale University.

Ball, W.

1990 "Tell Al-Hawa and the Development of Urbanization in the Jazira." *Al-Rāfidān* 11: 1–28.

Ball, W.; D. J. Tucker; and Tony J. Wilkinson

1989 "The Tell Al-Hawa Project. Archaeological Investigations in the North Jazira 1986–1987." *Iraq* 51: 1–66.

Barabási, A.-L., and R. Albert

1999 "Emergence of Scaling in Random Networks." *Science* 286: 509–12.

oi.uchicago.edu

Bar-Yosef, O., and A. Belfer-Cohen

1989 "The Levantine 'PPNB' Interaction Sphere." In *People and Culture in Change: Proceedings of the Second Symposium on Upper Palaeolithic, Mesolithic, and Neolithic Populations of Europe and the Mediterranean Basin*, edited by I. Hershkovitz, pp. 59–72. British Archaeological Reports, International Series 508. Oxford: British Archaeological Reports.

Binford, Lewis R.

1962 "Archaeology as Anthropology." *American Antiquity* 28: 217–25.

Blanton, R. E.

1976 "The Role of Symbiosis in Adaptation and Sociocultural Change in the Valley of Mexico." In *The Valley of Mexico: Studies in Pre-Hispanic Ecology and Society*, edited by E. R. Wolf, pp. 161–202. Albuquerque: University of New Mexico Press.

Breniquet, Catherine

1987 "Nouvelle hypothèse sur la disparition de la culture de Halaf." In *Préhistoire de la Mésopatamie: La Mésopotamie préhistorique et l'exploration récente du djebel Hamrin* (Colloque international du Centre National de la Recherche Scientifique, Paris 17–19 décembre 1984), edited by J.-L. Huot, pp. 231–42. Paris: Éditions de Centre National de la Recherche Scientifique.

1989 "Les origines de la culture d'Obeid en Mésopotamie du nord." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 325–38. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

1996 *La disparition de la culture de Halaf: Les origines de la culture d'Obeid dans le nord de la Mésopotamie*. Bibliothèque de la Délégation archéologique française en Iraq 9. Paris: Éditions recherches sur les civilisations.

Broom, L.; B. Siegel; E. C. Voigt; and J. B. Watson

1954 "Acculturation: An Exploratory Formulation." *American Anthropologist* 56: 973–1000.

Caldwell, Joseph R.

1964 "Interaction Spheres in Prehistory." In *Hopewellian Studies*, edited by J. R. Caldwell and R. L. Hall, pp. 133–43. Illinois State Museum Scientific Papers 12. Springfield: Illinois State Museum.

Campbell, Stuart

1999 "Archaeological Constructs and Past Reality on the Upper Euphrates." In *The Archaeology of the Upper Syrian Euphrates*, edited by G. del Olmo Lete and J.-L. Montero Fenollós, pp. 573–82. Barcelona: University of Barcelona.

2000 "The Burnt House at Arpachiyah: A Reexamination." *Bulletin of the American Schools of Oriental Research* 318: 1–40.

Campbell, Stuart; Elizabeth Carter; Elizabeth Healey; S. Anderson; A. Kennedy; and S. Whitcher

1999 "Emerging Complexity on the Kahramanmaras Plain, Turkey: The Domuztepe Project, 1995–1997." *American Journal of Archaeology* 103: 395–418.

Chapman, John, and Helena Hamerow, editors

1997 *Migrations and Invasions in Archaeological Explanation*. British Archaeological Reports, International Series 664. Oxford: Archaeopress.

Childe, V. Gordon

1929 *The Danube in Prehistory*. Oxford: Clarendon Press.

Clarke, David L.

1968 *Analytical Archaeology*. London: Methuen.

Copeland, Lorraine, and Francis Hours

1987 "The Halafians, Their Predecessors and Their Contemporaries in Northern Syria and the Levant: Relative and Absolute Chronologies." In *Chronologies du Proche-Orient*, edited by O. Aurenche, F. Hours, and J. Evin, pp. 401–25. British Archaeological Reports, International Series 379. Oxford: British Archaeological Reports.

oi.uchicago.edu

Costello, Sarah Kielt

2000 "Memory Tools in Early Mesopotamia." *Antiquity* 7: 475–76.

Davidson, Thomas E.

1977 Regional Variation within the Halaf Ceramic Tradition. Ph.D. dissertation, University of Edinburgh.

Davidson, Thomas E., and Trevor Watkins

1981 "Two Seasons of Excavation at Tell Aqab in the Jezirah, N.E. Syria." *Iraq* 43: 1–18.

Dietler, Michael

2001 "Theorizing the Feast: Rituals of Consumption, Commensal Politics, and Power in African Contexts." In *Feasts: Archaeological and Ethnographic Perspectives on Food, Politics, and Power*, edited by M. Dietler and B. Hayden, pp. 65–114. Smithsonian Series in Archaeological Inquiry. Washington, D.C.: Smithsonian Institution Press.

Douglas, Mary, and Baron Isherwood

1996 *The World of Goods: Towards an Anthropology of Consumption*. 2nd edition. London and New York: Routledge.

Emberling, Geoff, and Norman Yoffee

1999 "Thinking about Ethnicity in Mesopotamian Archaeology and History." In *Fluchtpunkt Uruk: Archäologische Einheit aus methodischer Vielfalt; Schriften für Hans Jörg Nissen*, edited by H. Kühne, R. Bernbeck, and Kerin Bartl, pp. 272–81. Rahden: Marie Leidorf.

Forest, Jean-Daniel

1983 *Les pratiques funéraires en Mésopotamie du 5^{e} millénaire au début du 3^{e}, étude de cas*. Paris: Éditions recherches sur les civilisations.

Frangipane, Marcella

2001 "Centralization Processes in Greater Mesopotamia: Uruk 'Expansion' as the Climax of Systemic Interactions among Areas of Greater Mesopotamian Region." In *Uruk Mesopotamia and Its Neighbors: Cross-Cultural Interactions in the Era of State Formation*, edited by M. S. Rothman, pp. 307–47. Sante Fe: School of American Research Press.

Freidel, David A.

1979 "Culture Areas and Interaction Spheres: Contrasting Approaches to the Emergence of Civilization in the Maya Lowlands." *American Antiquity* 44: 36–54.

Gell, Alfred

1998 *Art and Agency: An Anthropological Theory*. Oxford: Clarendon Press.

Hammade, Hamido, and Yayoi Yamazaki

2006 *Tell al-'Abr (Syria): Ubaid and Uruk Periods*. Association pour la promotion de l'histoire et de l'archéologie orientales, mémoires 4. Louvain: Peeters.

Hayden, Brian

2001 "Fabulous Feasts: A Prolegomenon to the Importance of Feasting." In *Feasts: Archaeological and Ethnographic Perspectives on Food, Politics, and Power*, edited by M. Dietler and B. Hayden, pp. 23–64. Smithsonian Series in Archaeological Inquiry. Washington, D.C.: Smithsonian Institution Press.

Helwing, Barbara

2003a "Feasts as a Social Dynamic in Prehistoric Western Asia: Three Case Studies from Syria and Anatolia." *Paléorient* 29: 63–86.

2003b "Feste in Değirmentepe? Die soziale Dynamik des Feierns in frühen komplexen Gesellschaften." In *From Villages to Towns: Studies Presented to Ufuk Esin*, edited by M. Özdoğan, H. Hauptmann, and N. Başgelen, pp. 57–72. Istanbul: Arkeoloji ve Sanat Publications.

Hodder, Ian

1982 *Symbols in Action: Ethnoarchaeological Studies of Material Culture*. New Studies in Archaeology. Cambridge: Cambridge University Press.

oi.uchicago.edu

Hole, Frank

1987 "Settlement and Society in the Village Period." In *The Archaeology of Western Iran: Settlement and Society from Prehistory to the Islamic Conquest*, edited by F. Hole, pp. 79–105. Smithsonian Series in Archaeological Inquiry. Washington, D.C.: Smithsonian Institution Press.

1989 "Patterns of Burial in the Fifth Millennium." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 149–80. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

2000 "The Prehistory of the Khabur." In *La Djéziré et l'Euphrate Syriens de la protohistoire à la fin du II^e millénaire av. J.-C.: Tendances dans l'interprétation historique des données nouvelles*, edited by O. Rouault and M. Wäfler, pp. 17–27. Subartu 7. Turnhout: Brepols.

Irving, A. C.

2001 A Contextual Study of Ceramic Evidence for Social Relations and Change during the Halaf-Ubaid Transition. Ph.D. dissertation, University of Manchester.

Jasim, Sabah A.

1985 *The 'Ubaid Period in Iraq: Recent Excavations in the Hamrin Region*. British Archaeological Reports, International Series 267. Oxford: British Archaeological Reports.

Jasim, Sabah A., and Joan Oates

1986 "Early Tokens and Tablets in Mesopotamia: New Information from Tell Abada and Tell Brak." *World Archaeology* 17: 348–62.

Karsgaard, Philip

2006 "Complex Environments, Complex Interactions: Fifth Millennium Mesopotamian Settlements in a Comparative Perspective." Paper delivered at the British Association for Near Eastern Archaeology annual meeting, Edinburgh.

Leroi-Gourhan, André

1973 *Milieu et techniques*. Évolution et techniques 2. Paris: Albin Michel.

Lesure, R. G.

1998 "Vessel Form and Function in an Early Formative Ceramic Assemblage from Coastal Mexico." *Journal of Field Archaeology* 25: 19–36.

Lloyd, Seton, and Fuad Safar

1945 "Tell Hassuna: Excavations by the Iraq Government Directorate General of Antiquities in 1943–4." *Journal of Near Eastern Studies* 4: 255–89.

Mallowan, M. E. L.

1946 "Excavations in the Baliḫ Valley, 1938." *Iraq* 8: 111–59.

1947 "Excavations at Brak and Chagar Bazar." *Iraq* 9: 1–259.

1966 "Ugarit." *Antiquity* 40: 29–32.

Mallowan, M. E. L., and J. Cruikshank Rose

1935 "Excavations at Tall Arpachiyah, 1933." *Iraq* 2: 1–178.

McCarthy, Andrew

2003 Signs of Shared Complexity: Glyptic and Large-scale Transformations in the 4th–3rd Millennia Near East. Ph.D. dissertation, University of Edinburgh.

Mithen, Steven

1999 "Symbolism and the Supernatural." In *The Evolution of Culture*, edited by R. Dunbar, C. Knight, and C. Power, pp. 147–69. Edinburgh: Edinburgh University Press.

Morphy, Howard

1989 "On Representing Ancestral Beings." In *Animals into Art*, edited by H. Morphy, pp. 144–60. London: Unwin Hyman.

Nieuwenhuyse, Olivier

2007 *Plain and Painted Pottery: The Rise of Late Neolithic Ceramic Styles on the Syrian and Northern Mesopotamian Plains*. Publications on Archaeology of the Leiden Museum of Antiquities 3. Turnhout: Brepols.

oi.uchicago.edu

Nissen, Hans J.

1988 *The Early History of the Ancient Near East, 9000–2000 B.C*. Translated by Elizabeth Lutzeier, with Kenneth Northcott. Chicago: University of Chicago Press.

1989 "The Ubaid Period in the Context of the Early History of the Ancient Near East." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 245–55. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

2001 "Cultural and Political Networks in the Ancient Near East during the Fourth and Third Millennia B.C." In *Uruk Mesopotamia and Its Neighbors: Cross-Cultural Interactions in the Era of State Formation*, edited by M. S. Rothman, pp. 149–79. Sante Fe: School of American Research Press.

Oates, Joan

1960 "Ur and Eridu, the Prehistory." *Iraq* 22: 32–50.

1980 "Land Use and Population in Prehistoric Mesopotamia." In *L'archéologie de l'Iraq: Perspectives et limites de l'interprétation anthropologique des documents*, edited by M.-T. Barrellet, pp. 303–14. Paris: Centre National de la Recherche Scientifique.

1983 "Ubaid Mesopotamia Reconsidered." In *The Hilly Flanks and Beyond: Essays in the Prehistory of Southwestern Asia Presented to Robert J. Braidwood, November l5, 1982*, edited by T. C. Young, P. E. L. Smith, and P. Mortensen, pp. 251–81. Studies in Ancient Oriental Civilization 36. Chicago: The Oriental Institute.

1987 "The Choga Mami Transitional." In *Préhistoire de la Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du djebel Hamrin* (Colloque international du Centre National de la Recherche Scientifique, Paris 17–19 décembre 1984), edited by J.-L. Huot, pp. 163–80. Paris: Éditions du Centre National de la Recherche Scientifique.

1993 "Trade and Power in the Fifth and Fourth Millennia B.C.: New Evidence from Northern Mesopotamia." *World Archaeology* 24: 403–22.

1996 "A Prehistoric Communication Revolution." *Cambridge Archaeological Journal* 6: 165–76.

2004 "Ubaid Mesopotamia Revisited." In *From Handaxe to Khan: Essays Presented to Peder Mortensen on the Occasion of His 70th Birthday*, edited by K. von Folsach, H. Thrane, and I. Thuesen, pp. 87–104. Aarhus: Aarhus University Press.

2005 "Archaeology in Mesopotamia: Digging Deeper at Tell Brak." *Proceedings of the British Academy* 131: 1–39.

Perkins, Ann Louise

1949 *The Comparative Archaeology of Early Mesopotamia*. Studies in Ancient Oriental Civilization 25. Chicago: University of Chicago Press.

Pournelle, Jennifer R.

2003 Marshland of Cities: Deltaic Landscapes and the Evolution of Early Mesopotamian Civilization. Ph.D. dissertation, University of California, San Diego.

Renfrew, Colin

1977 "Space, Time and Polity." In *The Evolution of Social Systems*, edited by J. Friedman and M. J. Rowlands, pp. 89–112. London: Duckworth.

Renfrew, Colin, and John F. Cherry, editors

1986 *Peer Polity Interaction and Socio-Political Change*. Cambridge: Cambridge University Press.

Roaf, Michael, editor

1984 "Tell Madhhur, A Summary Report on the Excavations." *Sumer* 43: 80–90.

1989 "Social Organization and Social Activities at Tell Madhhur." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 91–146. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Safar, Fuad; Mohamed A. Mustafa; and Seton Lloyd

1981 *Eridu*. Baghdad: Ministry of Culture and Information.

oi.uchicago.edu

Sperber, Dan
1996 *Explaining Culture: A Naturalistic Approach*. Oxford: Blackwell.

Stein, Gil J.
1994 "Economy, Ritual and Power in 'Ubaid Mesopotamia." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 35–46. Monographs in World Archaeology 18. Madison: Prehistory Press.
2002 "From Passive Periphery to Active Agents: Emerging Perspectives in the Archaeology of Interregional Interaction." *American Anthropologist* 104: 903–16.

Stronach, David
1961 "Excavations at Ras al 'Amiya." *Iraq* 23: 95–137.

Thuesen, Ingolf
2000 "Ubaid Expansion in the Khabur: New Evidence from Tell Mashnaqa." In *La Djéziré et l'Euphrate Syriens de la protohistoire à la fin du II^e millénaire av. J.-C.: Tendances dans l'interprétation historique des données nouvelles*, edited by O. Rouault and M. Wäfler, pp. 71–79. Subartu 7. Turnhout: Brepols.

Tobler, Arthur J.
1950 Excavations at Tepe Gawra: Joint Expedition of the Baghdad School and the University Museum to Mesopotamia 2: *Levels IX–XX*. Museum Monographs. Philadelphia: University of Pennsylvania Press.

Watkins, Trevor, and Stuart Campbell
1986 *Excavations at Kharabeh Shattani*. Occasional Papers 14. Edinburgh: University of Edinburgh, Department of Archaeology.
1987 "The Chronology of the Halaf Culture." In *Chronologies in the Near East*, edited by O. Aurenche, J. Evin, and F. Hours, pp. 427–64. British Archaeological Reports, International Series 379. Oxford: British Archaeological Reports.

Watts, D. J., and S. H. Strogatz
1998 "Collective Dynamics of 'Small-World' Networks." *Nature* 393: 440–42.

Wengrow, David
2001 "The Evolution of Simplicity: Aesthetic Labour and Social Change in the Neolithic Near East." *World Archaeology* 33: 168–88.

Wilkinson, Tony J.
1998 "Water and Human Settlement in the Balikh Valley, Syria: Investigations from 1992–1995." *Journal of Field Archaeology* 25: 63–87.
2000a "Regional Approaches to Mesopotamian Archaeology: The Contribution of Archaeological Surveys." *Journal of Archaeological Research* 8: 219–67.
2000b "Archaeological Survey of the Tell Beydar Region, Syria, 1997." In *Tell Beydar: Environmental and Technical Studies*, edited by K. Van Lerberghe and G. Voet, pp. 1–37. Subartu 6. Turnhout: Brepols.

Wilkinson, Tony J.; Belinda H. Monahan; and D. J. Tucker
1996 "Khanijdal East: A Small Ubaid Site in Northern Iraq." *Iraq* 58: 17–50.

Wilkinson, Tony J., and D. J. Tucker
1995 *Settlement Development in the North Jazira, Iraq: A Study of the Archaeological Landscape*. Iraq Archaeological Reports 3. Warminster: Aris & Phillips.

Wright, Henry T.
1981 "The Southern Margins of Sumer: Archaeological Survey of the Area of Eridu and Ur." In *Heartland of Cities*, edited by R. McC. Adams, pp. 295–345. Chicago: University of Chicago Press.

Wright, Henry T., and Susan Pollock
1986 "Regional Socio-Economic Organization in Southern Mesopotamia: The Middle and Later Fifth Millennium." In *Préhistoire de la Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du djebel Hamrin* (Colloque international du Centre National de la Recherche Scientifique, Paris 17–19 décembre 1984), edited by J.-L. Huot, pp. 317–29. Paris: Éditions du Centre National de la Recherche Scientifique.

oi.uchicago.edu

Yoffee, Norman

1993 "Mesopotamian Interaction Spheres." In *Early Stages in the Evolution of Mesopotamian Civilization: Soviet Excavations in Northern Iraq*, edited by N. Yoffee and J. J. Clark, pp. 257–70. Tuscon: University of Arizona Press.

Ziegler, Charlotte

1953 *Die Keramik von der Qal'a des Haggi Mohammed*. Ausgrabungen der Deutschen Forschungsgemeln-schaft in Uruk-Warka 5. Berlin: Gebruder Mann.

oi.uchicago.edu

5

QUESTIONING THE HALAF-UBAID TRANSITION

STUART CAMPBELL, *University of Manchester*
ALEXANDRA FLETCHER, *The British Museum*

INTRODUCTION

Of necessity, archaeologists are extremely good at creating narratives out of apparently meager resources. Scraps of information, often widely separated in time and space, are spun together to create seemingly coherent accounts of the past. One key feature of the typical archaeological narrative is that the knowledge which we do possess is maximized and the areas of which we are more ignorant are minimized. To a considerable extent this is both justifiable and necessary if we are to have any success at all in understanding the past and, especially, prehistory. Even leaving aside issues concerning the nature of archaeological interpretation, it would be a simple task to demonstrate that, at the present rate of discovery and loss of archaeological heritage in the Near East, our knowledge will never be remotely comprehensive.

Inevitably, our understanding of the past is not usually created by a single act of interpretation. Instead it is incremental, with new interpretations developing, augmenting, or reacting to previous approaches. Links established between scattered information, and the assumptions that underlie them, are sometimes challenged by new approaches to the data, but they are also frequently incorporated into new and more refined interpretations. New narratives that draw on older conclusions, in whole or in part, can obscure the origin of significant assumptions so that eventually they become established as fact and cease to be questioned in the light of changing data.

One of the most frequently quoted jokes in academic contexts concerns the drunk man who loses his keys while walking along a road at night, and then searches for them under a lamp post some distance away, rather than looking for them in the dark area where he had dropped them.[1] Generally this example is used to suggest that, like that drunk, researchers should accept the positive of having at least a few illuminated areas to study despite the extent of the dark, inaccessible areas. We would like to turn the analogy in a different direction, however, and suggest that occasionally archaeologists should try to look beyond the patches of lamplight and attempt to assess the scale of some of the dark, poorly understood areas.

THE CREATION OF THE HALAF-UBAID TRANSITION

The accepted narrative of later prehistory in Mesopotamia is relatively straightforward and has been widely adopted, although there has been considerable variation in how it has been interpreted. At least in terms of painted ceramic styles, the Halaf is seen as having been the dominant tradition across north Mesopotamia from the late seventh millennium (calibrated) B.C., at much the same time as the Ubaid tradition became established in the south. At some point in the mid-sixth millennium (calibrated) B.C. the Ubaid tradition is seen as spreading from the south and being adopted across the area that had been originally dominated by the Halaf.

This narrative was outlined very early in the study of Near Eastern prehistory and was originally defined on the basis of a very small number of sites (Campbell 1998; 1999). Its main essence was already central to Mallowan's interpretation of Tell Arpachiyah in the mid-1930s and the evidence from Arpachiyah was an important influence

[1] A quick search on Google Scholar reveals just how common this joke is in academic publications!

oi.uchicago.edu

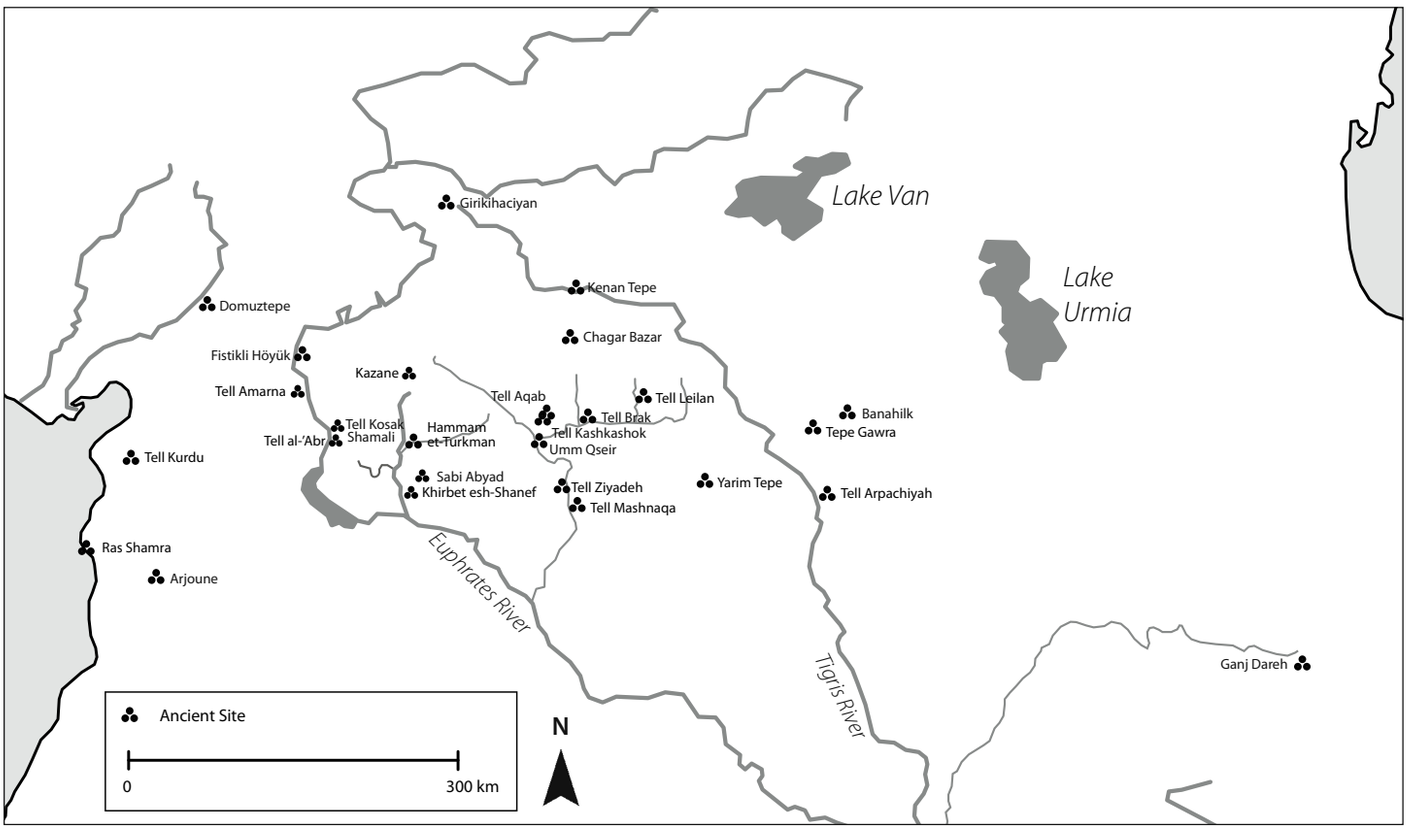


Figure 5.1. Map of main sites mentioned in the text

in formulating concepts of Ubaid expansion (Mallowan and Rose 1935). Level TT6 was probably the last Halaf phase of occupation at the site. This ended with a violent conflagration and associated destruction, among the most significant remains of which was the rich inventory of objects associated with the so-called Burnt House (Campbell 2000). The pottery of the succeeding TT5 level showed marked similarities with Ubaid sites in southern Mesopotamia. Mallowan suggested that the burning and violence seen in level TT6 indicated that the Halaf village had been sacked by Ubaid invaders (Mallowan and Rose 1935: 13–14, 17, and 106). Hence, the change from Halaf to Ubaid at other sites was assumed to be a violent and sudden phenomenon accompanied by significant population movement. The invasion theory was further supported by Mallowan and Linford through their discussion of the skeletal remains from Arpachiyah (Mallowan and Linford 1969). Physical differences between skeletons found in the Halaf and Ubaid phases were assumed to prove a change in population had taken place, rather than an assimilation of material culture from one social group to another (Breniquet 1989: 325; 1996: 28–29). Two physical types were identified and described as "sharply contrasting" (Mallowan and Linford 1969: 57) and, although the discussion did not provide a categorical statement, it was strongly implied that the two groups represented the earlier Halaf population and the invading Ubaid group.

In contrast, Mellaart suggested that the gradual transition between Late Halaf and Ubaid pottery style, as seen at Tepe Gawra, may have represented the true situation and Tell Arpachiyah may have experienced a break in occupation following a fire, rather than an Ubaid invasion.[2] It was therefore suggested that the change from the Halaf into the Ubaid may have been less traumatic and more gradual than Mallowan had originally envisaged (Mellaart 1975: 168; Lloyd 1978: 81). Arpachiyah remains the only Halaf site with a supposedly violent end, which does not fit well with any theory of conquest from southern Mesopotamia (Breniquet 1996: 29). The more gradual changes between the Halaf and Ubaid phases, observed at Tell Aqab as well as Tepe Gawra, finally led to the addition of a separate transitional phase to the chronological sequence, the Halaf-Ubaid transitional period, largely through Davidson's work (Davidson 1977; Davidson and Watkins 1981; Watkins and Campbell 1987).

[2] Supported in Campbell 1992: 194.

oi.uchicago.edu

Actual population movement has often been suggested as one factor behind the transition, although with very different emphases. Mellaart initially followed Mallowan in suggesting that the reliable high crop yields produced by irrigation agriculture in southern Mesopotamia caused unsustainable population growth. Unable to subsist on the land available, Ubaid populations moved north and migrated into the Halaf dry-farming zone (Mellaart 1965: 125–26 and 129). Although the suggested scale of population movement has decreased in more recent discussion, the movement of people has remained a significant component of several interpretations. Dabbagh suggested that individuals possessing potting skills migrated from areas of Ubaid occupation into the Halaf (Dabbagh 1966: 24). In addition, Breniquet proposed that it was not trade in pottery that caused the Halaf and Ubaid styles to spread, but that it was the movement of women within a system of matrimonial exchange which resulted in styles of ceramic production being widely disseminated within each area (Breniquet 1987: 236).

In contrast, Forest argued that population growth within the area of the northern fertile crescent may have caused small-scale, intra-regional population migrations and expansion until it became difficult to sustain agriculture in marginal areas. He suggested that Halaf societies then adopted Ubaid cultural traits and new social structures in order to survive. He emphasized that the adoption of these traits and structures did not involve physical replacement of populations, but acculturation and adaptation of the material culture and social structures that existed in southern Mesopotamia (Forest 1996: 53–55).

The movement of nomads over long distances has also been suggested as an alternative mechanism for the transmission of Ubaid material culture (Amiet 1981: 73; Breniquet 1996: 30). Cauvin proposed that the expansion of the Ubaid culture into the north and west of the Fertile Crescent was highly successful because it operated along the same lines of diffusion previously established by the expansion of Halaf cultural traits. He suggested that specific events, such as a marked local deterioration in climate, could encourage economic exchanges between nomadic and sedentary communities, and that these relationships significantly altered the material culture of village communities (Cauvin 1985: 201–05). Breniquet also suggested that the existence of similar Halaf ceramics over such a wide geographical area and the relatively rapid diffusion of technological change points to contact between groups through nomadic populations (Breniquet 1996: 30–31).

More broadly, Breniquet has made a major contribution to the interpretation of the transition between the Halaf and the Ubaid in a series of publications (1987, 1989, and 1996). She proposed that the Ubaid was not accompanied by a significant influx of population from the south but was a phenomenon created by the exchange of cultural characteristics. Within this development, the process of acculturation which lead to the formation of the northern Ubaid did not entirely obliterate pre-existing local cultural forms. Hence, clear differences can be perceived between the northern and southern Ubaid cultures, for example, in building plans (Breniquet 1987: 239). Breniquet argued that the northern Halaf communities had contact with Ubaid populations in the south at precisely the moment when Halaf population groups appeared to be less technologically advanced. In order to redress the perceived imbalance, innovative technology and material culture was borrowed from more developed groups and further internal development of Halaf society was stimulated. Breniquet suggested that it was the very permeability of Halaf society to external influences and its ability to change its material culture that permitted the radical transformation towards an Ubaid-type material culture assemblage to occur (Breniquet 1996: 34). Breniquet therefore envisaged the process of Halaf-Ubaid acculturation to have proceeded in three stages:

1) a large trade network was established in the Near East during the first half of the sixth millennium B.C.;
2) contact with other population groups led to slow changes within the Halaf culture;
3) finally, there was a rapid and significant uptake of Ubaid material culture, albeit with a distinct northern characteristic (Breniquet 1987: 239; 1989: 326–27).

The Halaf-Ubaid transition was essentially located at the beginning of the third stage, but foreshadowed by the changes already happening at the second.

Recently, Stein and Özbal have proposed a different approach that seeks to disaggregate the different elements of the Ubaid within an Ubaid interaction sphere or *oikumene* (Stein and Özbal 2007). Although they still view the phenomenon as essentially one of influence moving from south to north, they emphasize that there was a significant level of regionalism in the northern Ubaid, which they relate to the way in which local cultures chose to adopt different elements in different ways. They have emphasized the active role of identity in determining how cultural traits are adopted and that "the ways that … items were used and conceptualized in daily practice reveal profound cultural differences within this *oikumene*" (Stein and Özbal 2007: 342). While we have considerable areas of agree-

oi.uchicago.edu

ment with this approach, we would emphasize here that it remains an approach that is structured around a transition from a Halaf to an Ubaid. Frangipane has also recently suggested a contrast between horizontally egalitarian Halaf and vertically egalitarian Ubaid societies and identified the Ubaid as possessing specifically southern Mesopotamian origins (Frangipane 2007).

In all these explanations it should be emphasized that the Halaf-Ubaid transition remains a stage that is primarily identified through ceramics. It has certainly been suggested that there were other associated changes, including styles of burial (Breniquet 1987: 236–39) and sealing practices (Breniquet 1989: 332–34). The spread of tripartite house types has been particularly emphasized (Breniquet 1987: 239; 1996: 119–20). Nonetheless, ceramics remain the primary focus through which the phase is recognized. The transitional ceramics are often characterized by Halaf motifs being used on vessels of Ubaid shape and fabric, and vice versa. The complex vessel shapes and decoration of the Late Halaf were replaced by simpler shapes and monochrome geometric decoration. At Tell Aqab, the Halaf-Ubaid transitional levels show a notable decline in some vessel shapes popular in earlier Halaf levels, such as open bowls, saucers, plates, some jar forms, and disk-based bowls. Bow-rimmed jars appear during this phase, however, and have been considered a characteristic vessel shape for the period. Red washes also started to be used on some of the ceramics. These changes were apparently gradual at Tell Aqab; Ubaid traits were gradually adopted and adapted until they became dominant (Davidson and Watkins 1981: 7–9 and 12, figs. 2–3).

RAPIDITY AND DIRECTION OF MATERIAL CULTURE CHANGE DURING THE HALAF-UBAID TRANSITION

Although there is substantial variety in the ways that the transition from the Halaf to the Ubaid has been considered, all the approaches share some characteristics. There are two assumptions that seem particularly important. The first is that the direction of cultural influence was from south and east to the north and west, between a more advanced south and a technologically less developed north. This is explicit in most of the existing analyses. The second eponymous assumption is that it was a transition, a restricted period of change between two larger and more meaningful entities — "if a Halaf-Ubaid Transition exists, it must reflect a period of rapid cultural change" (Akkermans 1993: 323). This is sometimes less explicit, but is clearly implied in virtually all chronological charts (e.g., Breniquet 1996: 58; Cruells and Nieuwenhuyse 2004: table 2).

In the remainder of this article we wish to question these two assumptions, suggesting that there may, at least, be greater complexity than often acknowledged in the directions of influence and that, on present knowledge, the length of the Halaf-Ubaid transition is sufficiently poorly known to raise questions about our ability to understand its character. Although it is perhaps not conventional to overtly personalize academic analyses, it is, of course, the experience of individual archaeologists that shape their assumptions and perceptions. It is perhaps relevant to tie this analysis to the process through which it was arrived at and therefore the experience of the authors in understanding the Domuztepe ceramic assemblage will be used to place the discussion in context.

DATING THE DOMUZTEPE CERAMICS

The use of the traditional period terminology is deeply ingrained and when excavation started at Domuztepe in 1995 it seemed natural to use it to try to position the prehistoric occupation of the site both culturally and chronologically. Domuztepe is a large site (ca. 20 ha) situated between Kahramanmaraş and Gaziantep in southeast Turkey and has been under excavation since 1995 by a joint University of Manchester and University of California, Los Angeles, team (Campbell et al. 1999; Carter, Campbell, and Gauld 2003). Although the site is located on the northwestern edge of the distribution of Halaf and Ubaid ceramics, both types of pottery were already known from Elizabeth Carter's earlier surveys in the Kahramanmaraş region (Carter 1995). When excavation started, it was immediately obvious that the largest single group of pottery had strong affinities to classic Halaf pottery in north Mesopotamia in terms of technology, shape, and decoration, although fabrics had perhaps slightly higher quantities of grit temper. We also identified Ubaid influences in pottery from surface collections and excavation. Both pottery types seemed

oi.uchicago.edu

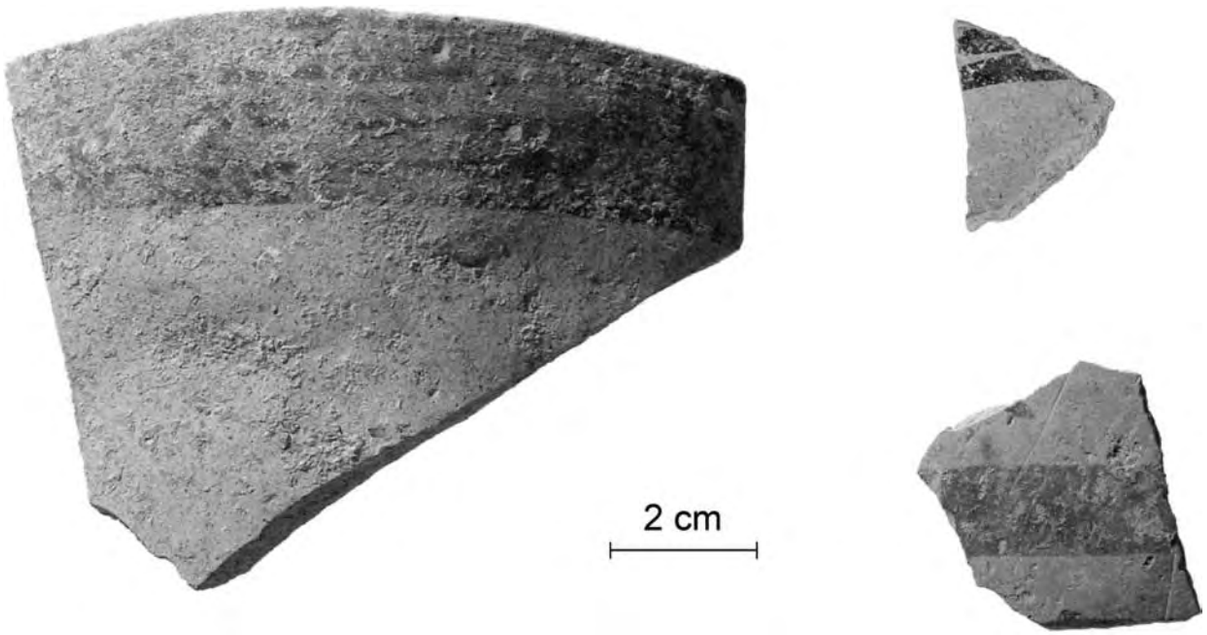


Figure 5.2. Typologically Ubaid pottery from Domuztepe

to exist alongside other more localized ceramic elements, including unpainted types and incised sherds (Campbell et al. 1999: 407–12; Irving 2001: 379–412 and 415–34).

The most obvious component where Ubaid influences were identified was a small group of sherds that we considered as typologically northern Ubaid (fig. 5.2). The fabric of these sherds is well fired and typically buff or slightly green with fine grit temper, sometimes with an admixture of chaff. The surfaces are smoothed and the paint, when present, is characteristically dull gray brown to black, sometimes with a slight purple tinge. Since the sherds recovered were often small, shape is not always obvious, but both bowls and jars are present, probably with a greater number of the former. Decoration is generally simple, mostly no more than plain linear bands. The frequency of these Ubaid sherds is low in all levels, rarely more than 0.3 percent of diagnostic pottery in any context, but it does increase through time.[3]

We also felt we could identify Ubaid influences in two other pottery types, Bichrome and Painted Orange (fig. 5.4). These wares are closely related and very distinctive. The Painted Orange sherds have a distinctive orange slip and dark brown or black paint. Bichrome sherds often have a similar slip and combine two paint colors, usually a red paint together with a dark brown or black color. It seems very probable that, although the wares are often distinct, Painted Orange sherds sometimes come from the portions of Bichrome vessels that happen to only have one color present. In both cases, the fabric is very fine, with almost no visible inclusions. The firing is higher than for most other ceramics and the typical fabric colors are clear oranges and browns, although sometimes with a light gray core. In terms of fabric, the relationship is certainly closer to classic Halaf ceramics. Many of the shapes, however, are less obviously Halaf and include sinuous-sided bowls that seem to have some relationship to bell-shaped bowls of the northern Ubaid. Bow-rim jars and jars with small handles between the base of the neck and shoulder are also represented (fig. 5.3a). The decoration of these types of vessels also seem to have Ubaid parallels. Motifs generally cover large areas and sometimes form interrupted rather than continuous bands. Specific motifs associated with these ceramic categories also include the characteristic "eye" motif found on north Syrian pottery in the Ubaid period (e.g., Hammade and Yamazaki 2006: pl. 6.35:1–3).

[3] We are happy to acknowledge several other ceramicists familiar with prehistoric pottery from north Mesopotamia who have confirmed this category as falling within the typological range of northern Ubaid, including a particularly useful discussion with Tatsundo Koizumi during a visit to the University of Manchester in 2006.

oi.uchicago.edu

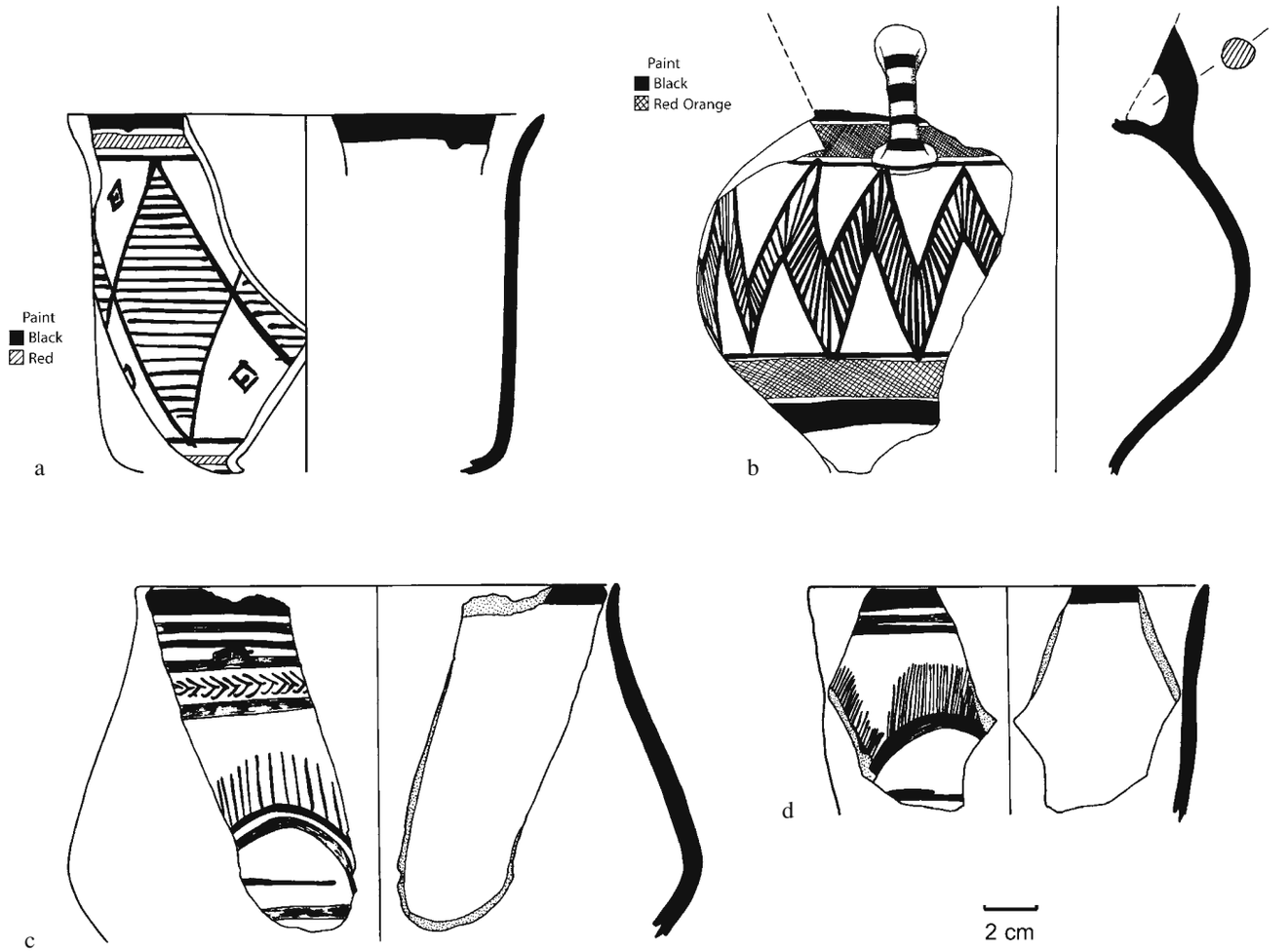


Figure 5.3. Painted Orange and Bichrome pottery from Domuztepe

The consistent presence of red-slipped and burnished sherds at Domuztepe, which make up as much as 4 percent of the assemblage, also seemed to correspond with the appearance of similar pottery described by Davidson at Tell Aqab in the transitional levels (fig. 5.4). Although they could also fit into the spectrum of red-washed wares, which are generally burnished, within the north Syrian Halaf (Leenders 1989), the presence of specific shapes such as bow rim jars, appeared significant (Davidson 1977). At Domuztepe, this is clearly part of a wider tradition that also includes brown and black slipped burnished ceramics.

The presence of this range of material with apparent affinities to northern Ubaid and Halaf-Ubaid transitional assemblages seemed to us to provide a clear indication of the relative date of the excavated occupation at Domuztepe. We did not use the term "Halaf-Ubaid transition," because it was not clear that the Ubaid influence was significant beyond the specific types discussed above, nor was it clear that the ceramic assemblages were necessarily on a trajectory toward the Ubaid. Certainly, surface collections in the Kahramanmaraş plain indicate that there was at least one further stage in the regional development of painted ceramic traditions before the appearance of full northern Ubaid ceramics (Eissenstat 2004). Instead, we introduced the term "post-Halaf" to describe the pottery from the latest phases of occupation at the site (Campbell et al. 1999: 410). This appeared to be a satisfactory interpretation of the relative chronology, pottery typology, and cultural links until we received the results of the first set of radiocarbon dates from the site.

We now have nineteen radiocarbon dates from the prehistoric levels of Domuztepe and they have confirmed the results of that first batch of determinations. The interpretation of the dates is based on Bayesian calibration performed using OxCal 4.0 (Bronk Ramsey 1995; 2001), together with data from other well-dated sites (see much more extensive discussion in Campbell 2007). The earliest dated occupation in Operation I at Domuztepe is unlikely to be

oi.uchicago.edu

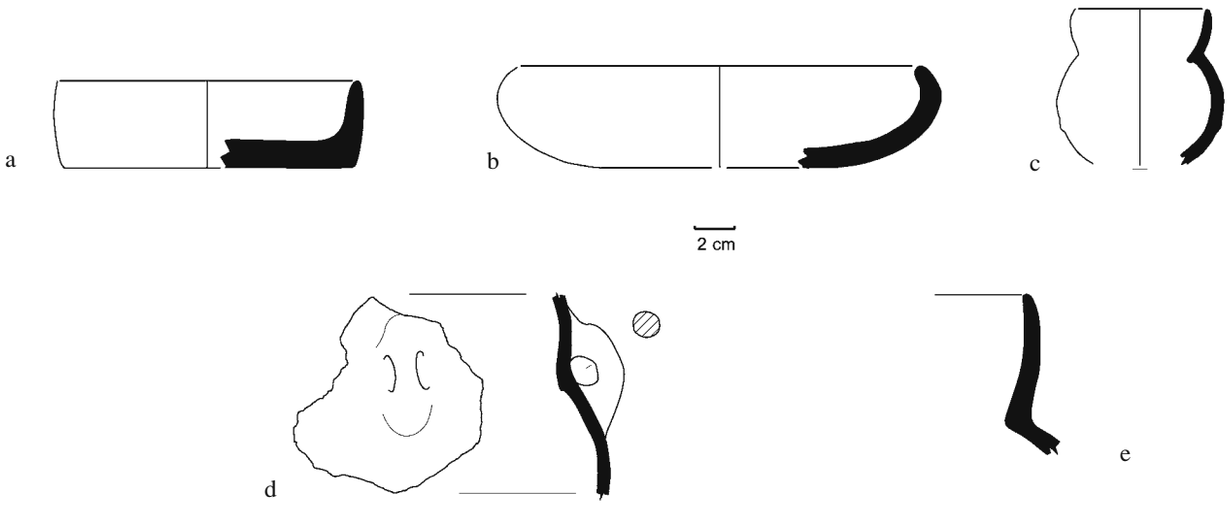


Figure 5.4. Red burnished pottery from Domuztepe

later than 5800 (calibrated) B.C., although "Ubaid"-related material is not present at this date. The first material that seems to have some Ubaid affinities, seen in the greenish, typologically northern Ubaid pottery, Painted Orange ceramics, and in red burnished wares, appears in Operation II, which must date to shortly after 5700 (calibrated) B.C. Levels that were initially labeled post-Halaf, which show gradually increasing quantities of "Ubaid"-related material through time, are found in several parts of the site, but they are best represented and dated in Operation I. These levels exist as deposits that are contemporary with and later than the Death Pit. This large-scale multiple burial provides an excellent reference point for dating, since four dates associated with this feature come from well-stratified individual cereal grains, which can be treated as coming from a single event. This context can therefore be securely dated to 5628–5552 (calibrated) B.C. at a 95 percent probability. The end of the sequence at Domuztepe is less well constrained and its dating less precise. A suggestion of 5475 (calibrated) B.C. is plausible with the earliest and latest feasible dates being ca. 5500 and ca. 5400 (calibrated) B.C., respectively.

This places even the latest deposits containing sherds with "Ubaid" affinities well before both the end of the Halaf and the earliest securely dated Ubaid or Half-Ubaid transitional material in northern Mesopotamia. In traditional terms, the earliest deposits with this material at Domuztepe would be in the Middle Halaf or early in Halaf II (see Cruells and Nieuwenhuyse 2004: table 2, and discussion in Campbell 2007). Although the detailed dating for the Halaf-Ubaid transition is discussed below, it seems extremely unlikely that the initial interpretation that led to the classification of Post-Halaf material is remotely correct. There are several possible explanations that are worthy of consideration.

There are direct links at Domuztepe with the southern Ubaid. This might seem initially attractive, as it would account for Ubaid affinities at Domuztepe in the correct time frame. Indeed, Breniquet suggested that the Halaf-Ubaid transition was only the final stage of a longer process of cultural borrowing (Breniquet 1987: 239; 1989: 326–27), and Oates has presented a convincing case that at this time there was direct contact between north and south based on trade concentrated through settlements such as Tell Brak (Oates 1993). The possibility fails, however, on typological grounds. Although the absolute dating of the southern Ubaid is itself poor, the parallels would probably need to be with Ubaid 2 material. However, the parallels that we noted initially at Domuztepe are with later Ubaid 3/4 material and are specifically with northern Ubaid material from northwest Mesopotamia and the north Levant rather than with southern Mesopotamia.

The excavators at Domuztepe were mistaken in the parallels they identified. While this should certainly not be discounted, we have looked again at the material with great care, and several other experienced ceramicists unconnected with Domuztepe have done so as well. The bulk of the material that we categorized as "Ubaid" remains typologically distinct, and we have little doubt that, were it to be found, for example, out of context in a surface assemblage, we and others would record it as Ubaid without qualification. Similarly, the bulk of the parallels in shape and decoration that we noted between our Bichrome and Painted Orange wares and northwestern Ubaid material

oi.uchicago.edu

elsewhere appear to remain valid, albeit perhaps a little less simplistic. With the red-washed and burnished material we might pay more attention to its earlier appearance in northern Halaf sites (Leenders 1989), but the identification of types such as bow-rim jars would still point to slightly later parallels. At present we argue that we need to distinguish ceramic traits that may be typologically "Ubaid" but that exist within a wider context that is neither culturally nor chronologically Ubaid.

The material from Domuztepe that was originally identified as northern Ubaid may actually come from a very different developmental trajectory. If we accept that the Ubaid parallels we describe are not derived from links to the southern Ubaid ceramic tradition, then we must seek different origins for them in a much more local context. It is possible that acceptance of the traditional south-north narrative may have obscured more productive explanations for local and regional stylistic change. Some confirmation that this is not unique to Domuztepe has come from Khirbet esh-Shanef, a Halaf site in the Balikh Valley broadly contemporary with the later deposits at Domuztepe (Akkermans and Wittman 1993), where the excavators also noted Ubaid-like sherds in firmly Halaf contexts, but explained them away as potential but undemonstrated contamination (P. Akkermans, pers. comm.). If it is accepted that core elements of the material which later became part of the northern Ubaid assemblage had local roots, then this may inevitably lead us to place more stress on internal mechanisms of change rather than external stimuli.

In fact, far from being linked to an Ubaid expansion from southern Mesopotamia, we now suggest that some of the distinctive traits that we suggested were Ubaid-related actually derive from a Levantine ceramic tradition. The Bichrome pottery certainly finds its main comparisons in terms of shape, technology, and decoration at northern Levantine sites such as Ras Shamra (de Contenson 1992). The red-washed and burnished material has particularly strong links farther south in the Levant. These links are not only with the scattered sites with Halaf affinities farther down the Levant, such as Arjoune, but also provide connections with the Wadi Rabah traditions in the southern Levant (Campbell 2003). It seems possible that, at least along the bend of the Euphrates in northern Syria and possibly the Khabur, the northern Ubaid has significant stylistic influences coming from the north and west as well as the east and south. How far these influences contributed to developments farther east requires more study, but we would note the apparent rise of regional ceramic groupings in the Late Chalcolithic I period (see Frangipane 1998: 195–206; Özgen et al. 1999: 21; Mazzoni 2000: 97–100).

This is not to argue that the northern Ubaid is a purely local development without links to the south. It would be extremely foolish to do that. We argue, however, that the northern Ubaid needs to be seen as an outcome of a complex and multi-linear development, part of which is on a trajectory that is very firmly based in local traditions. Nor would we argue that the evidence from Domuztepe has inherent relevance far beyond its own region. The Domuztepe evidence may describe a very different situation to that of northern Iraq, for example, although it would seem to help our understanding of developments at least in north Syria and southeast Turkey. This development may point toward an interpretation in which the Halaf-Ubaid transition can be seen as a much more complex phenomenon, regionally fragmented and the product of different lines of influence, including both local developments and borrowings from more than one direction (see Irving 2001: 448–51). It is not to deny that the largest single influence may still be from the south, but it may suggest that the orthodox identification of it as being defined by southern influence may be, at least in part, driven by terminological and historical biases. Seeing the phase as one with multiple lines of influence might make it easier to understand how other potentially critical cultural phenomena, such as the widespread use of the seals and sealing practices, seem to spread from the north to the south.

DURATION OF THE HALAF-UBAID TRANSITION

It is not only the range and direction of material culture change within the Halaf-Ubaid transition that are important to our understanding of it. We also require a clearer understanding of the tempo of change and the duration of the period. As outlined above, previous approaches have implicitly or explicitly assumed that it is a relatively brief phase, which is critical if this period is interpreted as a bridge between periods that differ in terms of ceramic style. However, when it comes to assigning an exact length to the transition, it rapidly becomes apparent that there are more uncertainties than might be expected.

First, there are no sites with a reliable set of dates that cover the transitional period. Indeed, only two sites have clear excavated sequences that run from the Halaf into the Ubaid: Tepe Gawra (Tobler 1950) and Tell Aqab (Davidson and Watkins 1981); Yarim Tepe II and III may provide a further example. The transition at Tepe Gawra is prob-

oi.uchicago.edu

lematic largely because of the period of the excavations. Fine stratigraphic controls were lacking in the 1930s and ceramics were not quantitatively recorded so that although levels XX–XV cover this phase, it is hard to assess the exact nature of the change or the length of time through which it took place (Tobler 1950: 131–40). The radiocarbon dates from Tepe Gawra are also largely unsatisfactory for current purposes. They are old determinations, including one from Libby's original 1955 publication on the technique of radiocarbon dating (Libby 1955: 82–83), that are rather imprecisely stratified and no level has more than one date that would allow for cross-checking. At Tell Aqab, although excavations were of a much higher standard, the exposures were relatively small and much of the key contextual data is unpublished. There are three dates, but their context cannot be fully understood without that information (see Campbell 2007 for discussion of these and other dates).

The only remaining way of determining the length of the Halaf-Ubaid transition, therefore, is to compare the latest dates for the Halaf and the earliest dates for the northern Ubaid. The approach adopted here draws heavily on a more comprehensive and wider study of the chronology of later prehistory of northern Mesopotamia (Campbell 2007). This is based on data from sites with excavated sequences and multiple radiocarbon dates. Dates with very large standard deviations and sites where the context and sequence of the dated material were uncertain have been omitted from the analysis. This omission excludes a significant amount of data, but it minimizes the chance of misleading conclusions based on poorly stratified or inaccurate dates and places greatest emphasis on sites where our knowledge is also greatest. The use of stratigraphic sequences is also important because it makes maximum use of recent approaches to calibration. Bayesian calibration draws on information from stratigraphy as well as the radiocarbon dates themselves. OxCal 4.0 was used for all calculations and the results are summarized in figure 5.5. In all cases, chronological models were constructed based on the published stratigraphic evidence, and all dates were included except where they had a very low index of agreement with their stratigraphic positions. All the dates below are derived from chronological models with agreement indexes of above 60 percent, which is considered equivalent to a conventional χ^2 test significant at the 95 percent level of significance (Bronk Ramsey 1995; 2001).

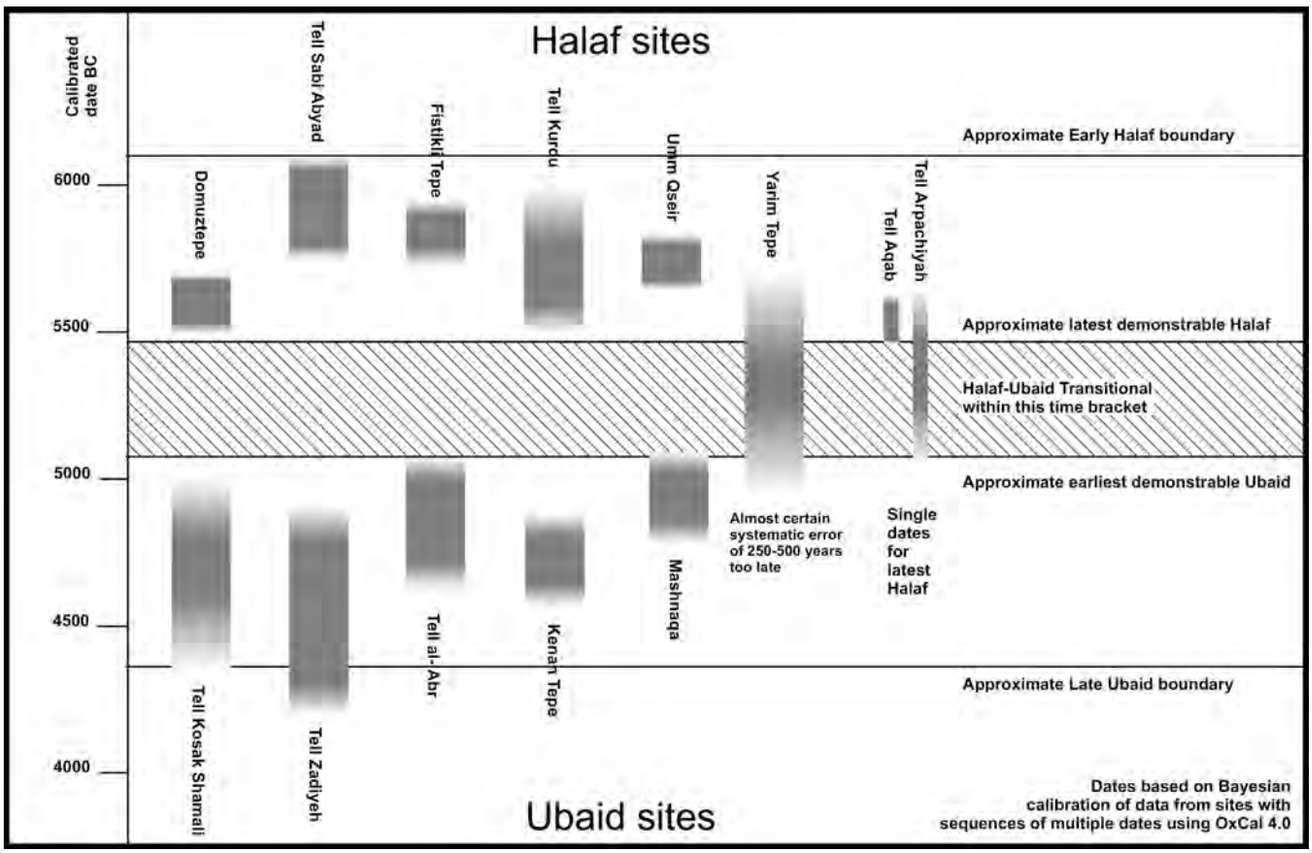


Figure 5.5. Overall chronological model from the key sites highlighting the time period into which the Halaf-Ubaid transition must be placed. The time ranges for individual sites are only indicative (see Campbell 2007 for details)

oi.uchicago.edu

There are few satisfactory sequences of dates for the late Halaf. Although there are groups of dates for Tell Sabi Abyad, Fıstıklı Höyük, Tell Kurdu, Domuztepe, and Yarim Tepe II, the occupations at the first two sites are quite early within the Halaf. Unfortunately, the dates from Yarim Tepe appear to have a systematic error that causes them to appear 200–300 years too late (Campbell 2007). This discrepancy in dates means that the existing evidence, from sites with well stratified sequences of relatively recent dates, comes from just two sites, Tell Kurdu and Domuztepe. This evidence suggests that the Halaf period cannot be conclusively shown to extend beyond a date somewhere between ca. 5500 and ca. 5400 (calibrated) B.C.

There is more evidence of the date of the earliest Ubaid in northern Mesopotamia. Even so, as none of the sequences for which satisfactory sets of dates are available extends into the Halaf-Ubaid transition, all that can be recognized is a date by which the Ubaid is established rather than the actual point at which it appeared. There are recent, well-stratified dates from Tell Mashnaqa (Thuesen 2000: 72–74), Tell al-'Abr (Hammade and Yamazaki 2006: 431), Tell Ziyadeh (Hole 2001: 74), Kenan Tepe (Parker and Dodd 2005: 71–73, 90–91)[4] and Tell Kosak Shamali (Nishiaki and Matsutani 2001: 154, table 5.1). At Mashnaqa, Stratum I has some of the earliest northern Ubaid ceramics and the calibration results support a date that is certainly after 5300 (calibrated) B.C. and might be as late as 5100 (calibrated) B.C. The five radiocarbon dates from Tell al-'Abr suggest that level 7, which the excavators argue is very early in the northern Syria Ubaid tradition, is very unlikely to date to before 5200 (calibrated) B.C. and a date as late as 5000 (calibrated) B.C. is possible. The large set of twenty-three radiocarbon dates from Tell Ziyadeh suggests that the start of the Early Ubaid phase at that site is almost certainly after 4900 (calibrated) B.C., although probably no later than 4800 (calibrated) B.C. None of the levels at Kenan Tepe in southeast Turkey are likely to date from before 4800 (calibrated) B.C. Although the Ubaid sequence at Tell Kosak Shamali may start very close to the Halaf-Ubaid transition, reliable dates have not been obtained from the beginning of the sequence. Based on the good group of dates from levels 10 and 11 and estimates for the length of occupation in earlier Ubaid levels, it is possible to argue that the start of the sequence might be as late as ca. 5000 (calibrated) B.C. or perhaps as early as ca. 5200 (calibrated) B.C.

If these optimal sets of dates are considered together, it is apparent that there is no positive indication that the Halaf ended after 5500 (calibrated) B.C. or that the Ubaid started until 5100 or 5000 (calibrated) B.C., giving a maximum range between the latest dated Halaf and the earliest dated Ubaid of 400–500 years. Obviously there may well be later Halaf material than has yet been dated just as there may be earlier Ubaid material. The restriction of only using sequences of dates excludes a significant number of determinations. An examination of thirty-six additional dates, however, from Khirbet esh-Shanef, Tell Amarna, Chagar Bazar, Tell Aqab, Tell Arpachiyah, Banahilk, Girikihaciyan, Kazane, Umm Qseir, Tell Kashkashok I, Tepe Gawra, Tell Kurdu, Tell Leilan, and Hammam et-Turkman shows that very few include the period between 5500 and 5100 (calibrated) B.C., even within their calibrated ranges at two standard deviations (Campbell 2007).

Another way to look at the absence of chronological data for this period is to look at the evenness of our chronological knowledge over a longer period. For this, a complete set of dates can be considered including all dates from north Mesopotamia with a mean value of between 8,000 and 5,500 B.P. (ca. 7000–4300 [calibrated] B.C.), without regard to cultural attribution. This produces a sample of 321 dates and, for simplicity, only the central mean of each date is used.[5] These values can be compared to the dates that are used to create the radiocarbon calibration curve itself, since that provides a sample of dates that are evenly spaced in calendar years. The most recent version of the calibration curve has one radiocarbon date every five calendar years for this period (Reimer et al. 2004).

If the archaeological dates, in essence our chronological knowledge, were evenly distributed throughout the period, one would expect their distribution to be very similar to the distributions of the evenly spaced dates on the calibration curve. Differences between the distributions should highlight time periods for which there are either more determinations on archaeological material than expected or fewer. Figure 5.6 shows clearly that we have a very uneven selection of data. The darker gray area highlights a zone of poor chronological knowledge from 6,300 B.P. onward (ca. 5300 [calibrated] B.C.). This is a period from which we have relatively few dates, and for the period ca. 6,300 to 6,100 B.P. this lack is severe. Although this is only 200 radiocarbon years, it is more significant because it falls on a flat part of the curve and corresponds to at least 300 calendrical years, about which we have extremely

[4] We are very grateful to Bradley Parker and Lynn Swartz for information on these dates.

[5] Since we are interested in the distribution of dates, using the center of the probability distribution of an individual date and ignoring the probability distribution itself is largely justifiable.

oi.uchicago.edu

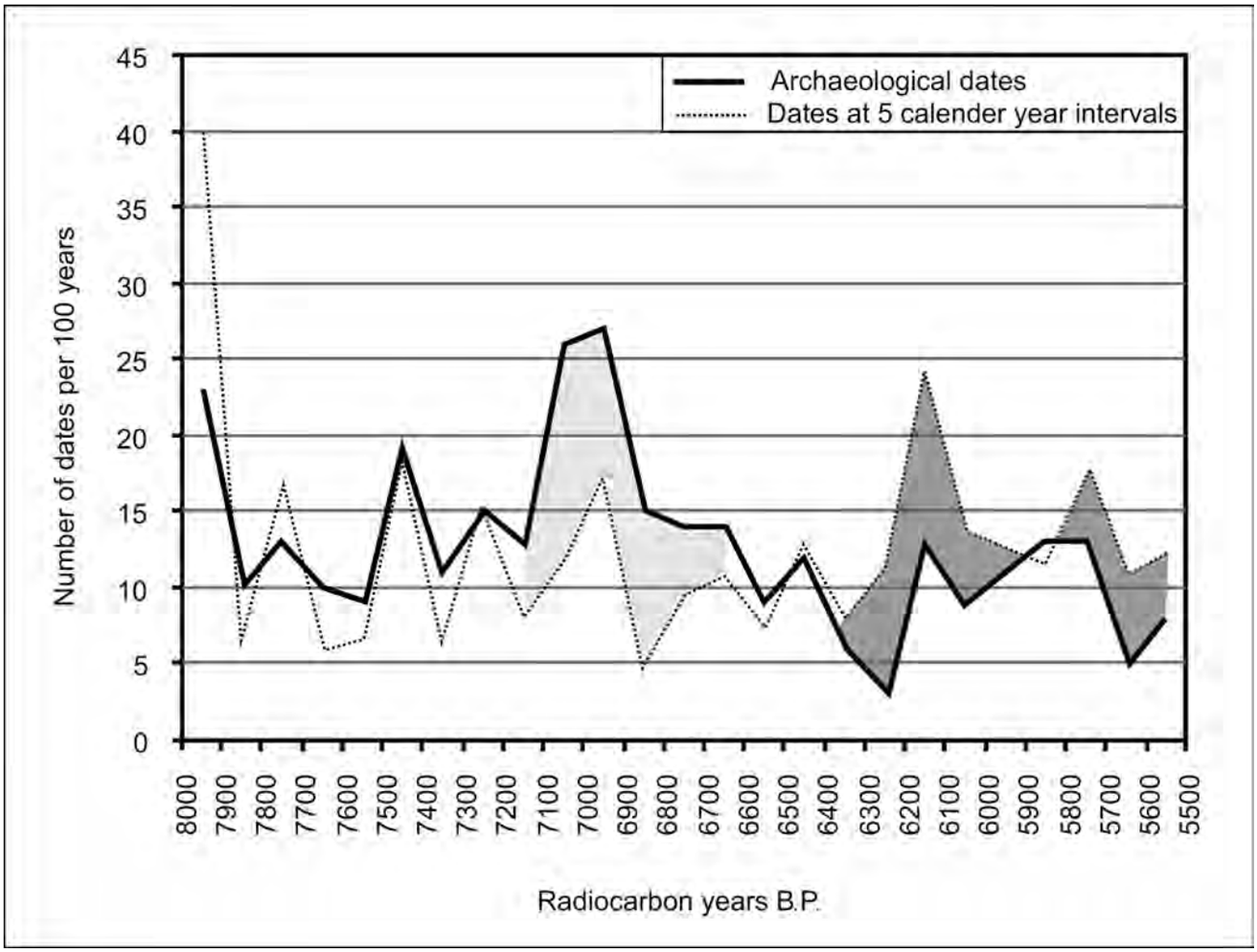


Figure 5.6. Comparison of the number of actual archaeological dates per century (radiocarbon years B.P.) with the number expected if there is an even distribution of chronological knowledge (data for the latter from Reimer et al. 2004)

poor dating evidence for northern Mesopotamia. The lack of good dating evidence confirms the argument that the period in which the Halaf-Ubaid transition falls is one in which our chronological knowledge is severely lacking.

The potential length of the Halaf-Ubaid transition might be as long as 5500–5000 (calibrated) B.C. or as short as 5400–5200 (calibrated) B.C. If it were closer to the longer period of time, considerable doubt would be cast on the traditional approaches to the Halaf-Ubaid transition. It would be difficult to regard a period this long as transitional; it might be almost as long as each of the two periods it is supposedly transitional between. Indeed, by ca. 4800 (calibrated) B.C. the character of the northern Ubaid starts to change markedly with a decline in decorated ceramics (Thuesen 2000), so the classic northern Ubaid may be a surprisingly short period. Furthermore, the density of knowledge that we have from the Halaf-Ubaid transition would drop from its already sparse level to the point at which it might be questioned whether we know enough to make any general conclusions. The gap is obviously not necessarily this long but it remains a matter of interpretation, and the traditional interpretation of a relatively short transition is clearly not the only possibility.

CONCLUSION: LIGHT AND DARK

At best, therefore, we know the Halaf was the starting point and the Ubaid was the end point, but we know little of the process that led from one to the other. At worst, however, it must be useful to consider whether the obvious starting and end points are themselves artificial. The Halaf-Ubaid transition is a phase that was self-evidently intro-

oi.uchicago.edu

duced in reaction to the classic phasing of Near Eastern chronology, to ease the abruptness of the change between two phases, and it is possible to argue that to understand its use, we need to incorporate an understanding of the way in which the traditional culture history terminology has evolved. It has been argued elsewhere, however, that the traditional framework results from a very restricted group of classic type sites in Iraq which fundamentally influenced the chronological divisions across northern Mesopotamia, and the interpretations of social change that have been derived from them (Campbell 1998; 1999; 2007). Although later excavations have amplified the original sequences, these original pre-1945 type sites still largely determine the interpretational framework. In essence, in fact, it was the gaps between the occupational sequences that correspond to the boundaries in the chronological charts. To take an extreme view, the traditional phases are framed by gaps of ignorance produced by accidents of excavation, or, to return to the earlier analogy, the traditional phases are the pools of lamplight separated by darkness.

The Ubaid is something of an exception to this, but in a way that may have a bearing on qualifications that we may think of bringing to the Halaf-Ubaid transition. The Ubaid, as originally defined in southern Iraq in the 1920s and in the north at Tepe Gawra in the 1930s, started at a more or less contemporary point. In the south, earlier phases were labeled the "Eridu" and "Hajji Muhammad" phases. Ubaid chronology was redefined in 1960 when Joan Oates published her four-stage Ubaid chronology, incorporating the Eridu and Hajji Muhammad phases as "Ubaid 1" and "Ubaid 2" (Oates 1960). Although enormously valuable in many ways, this chronology has been significant for northern Mesopotamian archaeology because, although it certainly did not create it, it embedded the idea that the Ubaid style emerged as an entirely southern phenomenon into the terminology used by archaeologists — and such terminology matters because it shapes discussion both consciously and unconsciously.

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. Certainly, labels that are generated by reference to the traditional periods, such as the "Halaf-Ubaid transition," need to be treated with care because they suggest that the gaps in the initial sequence merely need to be accounted for as bridges between more substantial entities. At best, they are labels of convenience and, at worst, draw us into conclusions that confuse the sequence of archaeological discovery with real patterns from prehistory. The use of the traditional terminology also carries a danger of drawing us into unintentional use of culture history models. Both the Halaf and the Ubaid have frequently been discussed as though they are coherent cultural groups. The terms are used to describe entities that are seen to have common and distinctive characteristics, and which are treated almost as historical actors in their own right.

We argue that in the case of the Half-Ubaid transition, the length of this period might be significant, and a lack of knowledge about the scale of this gap may be detrimental to our ability to create meaningful narratives for the latter part of the sixth millennium (calibrated) B.C. in northern Mesopotamia. To draw on the analogy further, the concentration on the positives of the lamplit areas may have ignored and indeed obscured the importance of acknowledging the dark areas between. And it may be in these dark areas on which future research needs to focus.

BIBLIOGRAPHY

Akkermans, Peter M. M. G.

1993 *Villages in the Steppe: Later Neolithic Settlement and Subsistence in the Balikh Valley, Northern Syria.* Archaeological Series 5. Ann Arbor: International Monographs in Prehistory.

Akkermans, Peter M. M. G., and B. Wittman

1993 "Kirbet esh-Shanef 1991: Eine späthalafzeitliche Siedlung im Balikhtal Nordsyrien." *Mitteilungen des Deutschen Orient-Gesellschaft* 125: 143–66.

Amiet, Pierre

1981 "The Middle East." In *Art in the Ancient World*, edited by P. Amiet, C. D. Noblecourt, A. Pasquier, F. Baratte, and C. Metzger, pp. 9–173. London: Faber & Faber.

Breniquet, Catherine

1987 "Nouvelle hypothèse sur la disparition de la culture de Halaf." In *Préhistoire de la Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du djebel Hamrin* (Colloque international du Centre

oi.uchicago.edu

National de la Recherche Scientifique, Paris 17–19 décembre 1984), edited by J.-L. Huot, pp. 231–42. Paris: Éditions du Centre National de la Recherche Scientifique.

1989 "Les origines de la culture d'Obeid en Mésopotamie du nord." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 325–38. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

1996 *La disparition de la culture de Halaf: Les origines de la culture d'Obeid dans le nord de la Mésopotamie*. Bibliothèque de la Délégation archéologique française en Iraq 9. Paris: Éditions recherches sur les civilisations.

Bronk Ramsey, C.

1995 "Radiocarbon Calibration and Analysis of Stratigraphy: The OxCal Program." *Radiocarbon* 37: 425–30.

2001 "Development of the Radiocarbon Calibration Program OxCal." *Radiocarbon* 43: 355–63.

Campbell, Stuart

1992 Culture, Chronology and Change in the Later Neolithic of North Mesopotamia. Ph.D. dissertation, University of Edinburgh.

1998 "Problems of Definition: The Origins of the Halaf in North Iraq." In *About Subartu: Studies Devoted to Upper Mesopotamia,* Volume 1: *Landscape, Archaeology, Settlement*, edited by M. Lebeau, pp. 39–52. Subartu 4. Brussels: Brepols.

1999 "Archaeological Constructs and Past Reality on the Upper Euphrates." In *Archaeology of the Upper Syrian Euphrates: The Tishrin Dam Area*, edited by G. d. O. Lete and J. L. M. Fenollos, pp. 573–83. Barcelona: Editorial Ausa.

2000 "The Burnt House at Arpachiyah: A Reexamination." *Bulletin of the American Schools of Oriental Research* 318: 1–40.

2003 "Arjoune: Commentary on the Earlier Prehistoric Ceramics." In *Excavations at Arjoune, Syria*, edited by P. J. Parr, pp. 31–70. Biblical Archaeology Reports, International Series 1134. Oxford: Archaeopress.

2007 "Rethinking Halaf Chronologies." *Paléorient* 33: 103–36.

Campbell, Stuart; Elizabeth Carter; Elizabeth Healey; S. Anderson; A. Kennedy; and S. Whitcher

1999 "Emerging Complexity on the Kahramanmaras Plain, Turkey: The Domuztepe Project, 1995–1997." *American Journal of Archaeology* 103: 395–418.

Carter, Elizabeth

1995 "Report on the Kahramanmaraş Archaeological Survey Project from 24/9/93 to 11/11/93." *Araştırma Sonuçları Toplantısı* 12: 331–41.

Carter, Elizabeth; Stuart Campbell; and S. Gauld

2003 "Elusive Complexity: New Data from Late Halaf Domuztepe in South Central Turkey." *Paléorient* 29: 117–34.

Cauvin, J.

1985 "Les cultures villageoises et civilisations préurbaines d'Asie antérieure." In *La protohistoire de l'Europe*, edited by J. Lichardus and M. Lichardus-Itten, pp. 156–206. Paris: Presses Universitaires de France.

Cruells, W., and Olivier Nieuwenhuyse

2004 "The Proto-Halaf Period in Syria. New Sites, New Data." *Paléorient* 30: 47–68.

Dabbagh, T.

1966 "Halaf Pottery." *Sumer* 22: 23–43.

Davidson, Thomas E.

1977 Regional Variation within the Halaf Ceramic Tradition. Ph.D. dissertation, University of Edinburgh.

Davidson, Thomas E., and Trevor Watkins

1981 "Two Seasons of Excavation at Tell Aqab in the Jezirah, N.E. Syria." *Iraq* 43: 1–18.

de Contenson, Henri

1992 *Préhistoire de Ras Shamra: Les sondages stratigraphiques de 1955 à 1976*. 2 volumes. Ras Shamra-Ougarit 8. Paris: Éditions recherche sur les civilisations.

oi.uchicago.edu

Eissenstat, C. A.
2004 Ritualization of Settlement: Conditioning Factors of Spatial Congruity and Temporal Continuity during the Late Neolithic of Southeastern Anatolia. Ph.D. dissertation, University of California, Los Angeles.

Forest, Jean-Daniel
1996 *Mésopotamie: L'apparition de l'état*. Paris: Méditerranée.

Frangipane, Marcella
1998 "Changes in Upper Mesopotamia/Anatolian Relations at the Beginning of the 3rd Millennium B.C." In *About Subartu: Studies Devoted to Upper Mesopotamia,* Volume 1: *Landscape, Archaeology, Settlement*, edited by M. Lebeau, pp. 195–218. Subartu 4. Brussels: Brepols.
2007 "Different Types of Egalitarian Societies and the Development of Inequality in Early Mesopotamia." *World Archaeology* 39: 151–76.

Hammade, Hamido, and Yayoi Yamazaki
2006 *Tell al-'Abr (Syria): Ubaid and Uruk Periods*. Association pour la promotion de l'histoire et de l'archéologie orientales, mémoires 4. Louvain: Peeters.

Hole, Frank
2001 "A Radiocarbon Chronology for the Middle Khabur, Syria." *Iraq* 63: 67–98.

Irving, A. C.
2001 A Contextual Study of Ceramic Evidence for Social Relations and Change during the Halaf-Ubaid Transition. Ph.D. dissertation, University of Manchester.

Leenders, R.
1989 "The Red Wash Ware Ceramic Assemblage in Syria: A Review." In *To the Euphrates and Beyond: Archaeological Studies in Honour of Maurits N. van Loon*, edited by O. M. C. Haex, H. H. Curvers, and P. M. M. G. Akkermans, pp. 89–101. Rotterdam: A. A. Balkema.

Libby, Willard F.
1955 *Radiocarbon Dating*. Chicago: University of Chicago Press.

Lloyd, Seton
1978 *The Archaeology of Mesopotamia: From the Old Stone Age to the Persian Conquest*. London: Thames & Hudson.

Mallowan, M. E. L., and H. Linford
1969 "Rediscovered Skulls from Arpachiyah." *Iraq* 31: 49–58.

Mallowan, M. E. L., and J. Cruikshank Rose
1935 "Excavations at Tall Arpachiyah, 1933." *Iraq* 2: 1–178.

Mellaart, James
1965 *Earliest Civilizations of the Near East*. The Library of Early Civilizations. London: Thames & Hudson.
1975 *The Neolithic of the Near East*. London: Thames & Hudson.

Mazzoni, S.
2000 "From the Late Chalcolithic to Early Bronze I in North-West Syria: Anatolian Contact and Regional Perspective." In *From the Euphrates to the Caucasus: Chronologies for the VIth–IIIrd Millennium B.C.*, edited by C. Marro and H. Hauptmann, pp. 97–109. Istanbul: Institut français d'études anatoliennes d'Istanbul.

Nishiaki, Yoshihiro, and Toshio Matsutani, editors
2001 *Tell Kosak Shamali: The Archaeological Investigations on the Upper Euphrates, Syria*, Volume 1: *Chalcolithic Architecture and the Earlier Prehistoric Remains*. University Museum, the University of Tokyo Monograph 1. Tokyo: The University Museum, University of Tokyo; Oxford: Oxbow Books.

Oates, Joan
1960 "Ur and Eridu, the Prehistory." *Iraq* 22: 32–50.
1993 "Trade and Power in the Fifth and Fourth Millennia B.C.: New Evidence from Northern Mesopotamia." *World Archaeology* 24: 403–22.

oi.uchicago.edu

Özgen, E.; B. Helwing; A. Engin; O. Niewenhuyse; and R. Spoor

1999 "Oylum Höyük 1997–1998: Die Spätchalkolithische Siedlung auf der Westterrasse." *Anatolia Antiqua* 7: 19–67.

Parker, Bradley J., and Lynn Dodd

2005 "The Upper Tigris Archaeological Research Project (UTARP) — A Preliminary Report from the 2002 Field Season." *Anatolica* 30: 69–110.

Reimer, P.; M. Baillie; E. Bard; A. Bayliss; J. Beck; C. Bertrand; P. Blackwell; C. Buck; G. Burr; K. Cutler; P. Damon; R. Edwards; R. Fairbanks; M. Friedrich; T. Guilderson; A. Hogg; K. Hughen; B. Kromer; G. McCormac; S. Manning; C. Bronk Ramsey; R. Reimer; S. Remmele; J. Southon; M. Stuiver; S. Talamo; F. Taylor; J. van der Plicht; and C. Weyhenmeyer

2004 "IntCal04 Terrestrial Radiocarbon Age Calibration, 0–26 cal kyr B.P." *Radiocarbon* 46: 1029–58.

Stein, Gil J., and Rana Özbal

2007 "A Tale of Two *oikumenai*: Variation in the Expansionary Dynamics of 'Ubaid and Uruk Mesopotamia." In *Settlement and Society: Essays Dedicated to Robert McCormick Adams*, edited by E. C. Stone, pp. 329–42. Los Angeles: Cotsen Institute of Archaeology; Chicago: The Oriental Institute.

Thuesen, Ingolf

2000 "Ubaid Expansion in the Khabur: New Evidence from Tell Mashnaqa." In *La Djéziré et l'Euphrate Syriens de la protohistoire à la Fin du II^{e} millénaire av. J.C.: Tendances dans l'interprétation historique des données nouvelles*, edited by O. Rouault and M. Wäfler, pp. 71–79. Turnhout: Brepols.

Tobler, Arthur J.

1950 Excavations at Tepe Gawra: Joint Expedition of the Baghdad School and the University Museum to Mesopotamia 2: *Levels IX–XX*. Museum Monographs. Philadelphia: University of Pennsylvania Press.

Watkins, Trevor, and Stuart Campbell

1987 "The Chronology of the Halaf Culture." In *Chronologies du Proche Orient / Chronologies in the Near East: Relative Chronologies and Absolute Chronology, 16,000–4,000 B.P.* (C.N.R.S. International Symposium, Lyon, France, 24–28 November 1986), edited by O. Aurenche, J. Evin, and F. Hours, pp. 427–64. British Archaeological Reports, International Series 379(ii). Oxford: British Archaeological Reports.

oi.uchicago.edu

6

THE DEAD HAND OF DEIMEL

MCGUIRE GIBSON, *The Oriental Institute*

From 1999 to 2001 at Hamoukar, in northeastern Syria, a joint expedition of the Syrian Department of Antiquities and the Oriental Institute exposed evidence of cultural and social complexity that indicates state formation by at least the Local Late Chalcolithic 3, in levels just below a Late Uruk occupation of clearly southern character (Gibson 2000; Gibson et al. 2002). This finding, and the better-known, related information from Tell Brak, have put into doubt the standard paradigm of civilization's evolving first in southern Iraq during the Uruk period and then spreading, through trade mechanisms, into surrounding territories, where state formation occurred subsequently. It is clear now that there were somewhat simultaneous developments of complexity in both south and north. This relationship, however, shifted in Uruk IV when at least eastern Syria was conquered by southerners, who occupied some of the already well-developed northern capitals (Brak, Hamoukar) and set up strategically placed fortified sites (Jebel Aruda, Tell Blebis), as well as whole transplanted towns (Habuba Kabira South). The southerners were not just trading but were administering sizeable territories. In fact, it is possible that we should see the Uruk IV presence in eastern Syria as the earliest evidence of empire, and not just an informal one as Algaze (1986) suggested. Evidence of warfare found at Hamoukar in 2005 supports the conquest scenario. What is intriguing is a small as-yet unexcavated southern Uruk site just a hundred meters or so north of Hamoukar, which one may suspect was a trading colony prior to conquest.

That the conquests were carried out by one southern center, such as Uruk itself, or by a number of centers, including those in southwestern Iran, cannot be determined as yet. What may look like several colonies of one center may have been like the classical Greek colonies, established by several cities. Holly Pittman's demonstration (2001) of a complex set of relationships among regional styles of glyptic that link sites in the north and south, may help to answer that question. Of course the southerners still carried on trade within the occupied areas, but they reached far beyond eastern Syria through outposts (Haji Nebi Tepe) and down-the-line trade in the periphery beyond (Arslantepe).

The reaction to our announcement of early city development in Syria was a flurry of newspaper articles claiming that we had found the "earliest city in the world," despite my insistence that it was probably not that simple a picture. I emphasized that we did not know what was happening contemporaneously in southern Iraq, although I would argue that the south was still ahead in the development process, and that Hamoukar was not alone in Syria, since there was also Brak. I suggested at the time that the Uruk expansion was the result of a long development in which, due to an earlier contact with Ubaid traders (who would have been from more complex societies than those in Ubaid-period Syria), these northern areas were stimulated to elaborate their own more complex societies during the equivalent of the Early and Middle Uruk, even after close contacts with the south had been cut off (Nissen 2001). By the Uruk IV period, when southerners again pressed out into the neighboring territories, several northern areas had elaborated their own states, for instance Hamoukar and Brak, with city walls, institutional food preparation, administrative instruments including locally produced stamp seals, and evidence of craft specialists. In the pre-Uruk IV levels, in neither the south nor the north do we yet have evidence of real writing, although Joan Oates at Brak has artifacts that she sees as proto-tablets, analogous to some items found by Sabah Jasim at the Ubaid-period site of Tell Abada in central Iraq (Jasim 1985). There are most probably equivalent or more developed artifacts in the southern Early and Middle Uruk, but we have virtually no evidence for these levels in southern Mesopotamia because of the lack of digging in the abundantly available strata at major and minor sites. It is surprising to realize how few excavations there have been in sites of these periods in Iraq, but this does not prevent scholars from theorizing. We have available only the deep soundings at Eridu and Uruk to demonstrate the continuity between Ubaid and Uruk periods in the south. Michael R. Boehmer (pers. comm.) had planned to spend the 1990s in taking a 100 × 100 m trench down to virgin soil near the Eanna Precinct, but the Gulf War and sanctions intervened.

oi.uchicago.edu

I would be greatly surprised if there had not been in the south a long, steady growth in complexity from the Ubaid through the Middle Uruk, leading to the dazzling evidence of Uruk V and IV, but it is only a supposition until some digging is done. In the meantime, the expanding excavation of sites contemporary with the Ubaid and Uruk in Syria and Anatolia tends to shift the perception of the primary area of development northward. Our own findings at Hamoukar have added fuel to the north-centered argument, although I tried to right the balance by stating that we had to look to the earlier Ubaid period south to find the real origins of civilization and that the northern development during Local Late Chalcolithic was a secondary formation from the earlier Ubaid contact (Gibson 2000). The eventual return of research to southern Iraq will supply new evidence for the discussion and it will force a shift in the conception, most probably returning priority of development to the south. Guillermo Algaze has recently completed an essay on the "Sumerian takeoff," arguing for an understanding of environmental differences that led to more effective economic and social systems in southern Mesopotamia than elsewhere in the early development of complexity (Algaze 2007). He thus begins to redress the balance toward the south, once again.

In suggesting that the real origins of civilization were in the Ubaid in southern Mesopotamia, I pointed to the complexity reflected in non-religious buildings at Oueili (Huot 1991), Abada (Jasim 1985), and especially the palace found by Lloyd and Safar (1943) in the Ubaid mound at Uqair. Adams (1981) has already pointed to Uqair and Uruk as exhibiting key evidence for the early development of complexity. I will go further and suggest that we must be thinking of kingdoms and kings with real power in the Ubaid, not just chiefs or chiefdoms.

Propositions of complexity and even the existence of the state in the Ubaid period are hard to accept because of the holdover of some old theories that still have currency, even though discredited. Theoretical formulations reflect the periods in which they are being written. As early as the 1930s, as fascism in Europe became a fact of life, Wittfogel began to express in articles ideas that would later be expanded into Oriental Despotism (Wittfogel 1957). Thorkild Jacobsen (1943) proposed Mesopotamian primitive democracy as the Western democracies were at war with despots. In the era of the Cold War, Adams (1955) addressed militarism as a major cultural impetus and in later articles explored population growth (1972), ecology and social change (Adams 1978), trade (1974, 1975), and a number of other topics that mirrored concerns which were of general importance in the 1980s through 1990s. He turned to a study of technology (Adams 1996; 1997) as the world entered a new technological age. Today, in a time of global warming and environmental degradation, we seem to be having a resurgence of Catastrophism that, if not controlled, has tendencies toward environmental determinism (Yoffee and Cowgill 1988; Weiss and Courty 1993; Courty and Weiss 1997; Weiss 2000; Weiss and Bradley 2001; Cullen et al. 2000). In more subtle propositions, we are seeing attempts to address ancient civilization in the light of complexity theory (Lehner 2000) and, in a time much affected by Friedmanism, economics is gaining currency once again, whether viewed globally (Algaze 1993) or in more nuanced ways (e.g., Stein 1998; 1999; Adams 2004; Algaze 2007).

Theories lose potency as details are questioned, but echoes of them can be felt long after they have left the central arena of discourse. An example of this phenomenon for our field is an influential formulation proposed by the cuneiformist Anton Deimel in German (Deimel 1920; 1931). Anna Schneider (1920), an economic historian working only from translations of ancient texts and under the tutelage of Deimel, presented a similar argument. Deimel, a Jesuit priest who lived his adult life in the shadow of the Vatican, created for ancient Mesopotamia the notion of the Temple Economy or the Temple City/State — a kind of theocracy, with priests in charge, giving way at a later stage to kings. After the idea had lost a lot of steam, Falkenstein revived it and made it available to a larger audience by publishing in French his "Cité Temple sumerienne" (1954). An even larger audience was created with the translation of the Falkenstein article into English (1974).

A few scholars swam against the Temple Economy stream. Jacobsen, in his "Early Political Development in Mesopotamia" (1957), used paradigms taken from social anthropology to interpret ancient myths and legends as evidence of tribal society with councils of equals that were then transformed into kingdoms through the necessity of giving power to a leader in a crisis. Diakonoff (1969; 1974) and Gelb (1969) questioned the dominance of the temples, showing that there were also state and private sectors of the economy. Finally, Foster (1981) and Maekawa (1987, but see 1973–1974) effectively killed the temple economy and the temple state by showing that the very texts used by Deimel to establish the notion were really accounts of one temple's economic activity prepared for the queen of Lagash, who oversaw the institution. Effectively, the king, through the royal household, was in overall control of a state apparatus that included the temple sector.

But old ideas die hard. D'Altroy (2001), an archaeologist who works in Peru, has stated that the "most important element" given to more general archaeology by researchers on Uruk had been the idea of a "precocious theocratic state." Thus, Deimel's idea has been taken into Americanist archaeology, where it is distorting several areas of study

oi.uchicago.edu

just as it distorted Mesopotamian research. This one notion has been the worst export Mesopotamia ever sent out: a bad idea that was born in Mesopotamian studies has been adopted elsewhere and now comes back to us as anthropological theory, so there is a tendency to accept it without questioning its origins.

After years of fieldwork and numerous conferences, at least some of the main protagonists in the complexity debate now say that Deimel's Temple State is discredited (e.g., Stein 1994: 121), and that the man depicted in glyptic, relief, and statuary at Uruk and elsewhere with the attributes of a turban, beard, and net skirt is a king (Algaze 2001: 34; Nissen 2001: 157). This designation should have been universally accepted years ago since the man is depicted performing the major acts that later kings do: leading in battle, hunting lions, sitting in judgment, carrying out major construction, and occasionally performing rituals before deities. Even in this last action, there is no need for the man to be seen as a priest, because, although kings cross-culturally have religious or ritual functions as part of the legitimization of their rule, they are not normally priests.

Uruk IV has been made to be more religious than it was by the labeling of a major complex in the eastern part of the site of Uruk as the "Eanna Precinct." As Nissen has emphasized (2001: 154–55), there is "no real evidence for [the Eanna Precinct's] cultic character, since the only tangible proof was the initial excavators' identification of the large buildings as 'temples,' which is now rejected." There is probably an early temple to Inanna under the Ur III Eanna ziggurat, but this does not force an identification of the entire complex as religious. These were public buildings on a massive scale, but none of them have the distinct markings (especially the altar) of Mesopotamian temples, so clearly present in the Ubaid temples below and to one side of the Anu Ziggurat and the White Temple on its top. The plans of several of the Eanna buildings, although tripartite (e.g., the Limestone "Temple," the "Temple" on the North–South Terrace, "Temples" C and D), have a central T-shaped space that has to be derived from the houses with T-shaped central spaces of earlier Mesopotamia, going back to the Samarra period (e.g., Abada, Tell as-Sawwan, Madhhur) and that was still a feature of some houses in the Uruk period. The size and complexity of the buildings at Uruk, as well as the city's estimated size in the Uruk period, clearly entailed an organization of great complexity, far beyond the most powerful chief and, I would contend, beyond a set of priests.

In Mesopotamia, kingship had been supposed to begin only with the Early Dynastic, hence the period name. What went before, in the Uruk, had been seen as a theocracy, which should now be dropped as an idea in favor of kingship. But detailing the rise of kingship is a difficult task. Just as with the development of domesticated plants and animals, by the time you can see the evidence of the change, it had already happened. Despite growing acceptance of a king at least by Uruk times, the "priest-king" (Nissen 2001: 157), the "paramount ruler" (Pittman 2001: 429, presumably hedging her bets between a paramount chief and a king), and occasionally even the "priest" still make appearances in current literature. I am afraid that, in the present climate, he may become a "shaman," although I do not know how anyone is going to account for a shaman's leading in warfare or carrying out lethal judgments.

The Ubaid period has been solidly stuck in the chiefdom paradigm (Stein and Rothman 1994). Although there have been notable rejections of chiefdom as a concept (e.g., Yoffee 1993), the field still tends to prefer evolutionary schemes and wants a logical pre-state stage of development that has to be something between a tribal situation, where the chief is a consensus figure but has no solid power, and full kingship. In the earlier stage before such chiefdoms there is supposed to be tribal society, but this is a term that implies great variability and adaptability that are not understood well by the theorists. I find the concept of chiefdom not to be useful as a construct. In many conceptions of such strong chiefs, I see individuals who are acting like kings, but just not taking the title. We have examples in history of individuals who kept traditional titles but acted with real power. And we have the opposite, people with the title king or queen who were really powerless and were acting like chiefs, and not strong ones. For instance, Charles VI of France, even after being crowned through the efforts of Joan of Arc, was for some time much weaker than his vassals, such as the Duke of Burgundy, who were effectively acting like kings themselves. Mary Queen of Scots was not a real queen because she did not have an independent power base to strengthen her in the morass of clan politics, although her mother had been one since she had French troops to give her power. A condition by which Mary was given the throne was that she dismiss the French troops, and thus she lost her power. Gudea of Lagash kept the title of governor, not king, although he acted like a king in all respects. He did not take the title king, I would assert, because there was already a king, that is, one or more of the weak, ineffectual, late kings of Akkad or the Gutian usurpers of that title. In my view, if someone is shown acting like a king, call him a king and be done with it, while trying to understand the reason for the lack of the title.

The criteria that we have relied on to judge the presence of complexity, or "civilization," as outlined by Childe (1950) were clearly in evidence during the Uruk, including non-kin-based kingship, if one can see past the theocratic haze. But I have indicated that it was not in the Uruk period that civilization first crystallized but rather the

oi.uchicago.edu

Ubaid period in southern Mesopotamia. I would argue that the processes reflected in the material culture of the Uruk period were secondary steps or consolidations.

Besides the evidence of major non-religious buildings at Ubaid sites in the south (Abada, Oueili, Uqair), the sizes of some of the mounds (Oueili, Uqair) approximate or exceed the size of those in Uruk IV colonies and contemporary Late Chalcolithic sites in Syria (Adams 1981: 58–59). In addition, there is evidence of well-developed differential access to and employment of prestige objects at Abada, as discussed by Jasim (1985). I would suggest that we are viewing the evidence for the beginnings of early kingship at these Ubaid-period sites.

The Ubaid interaction sphere (Nissen 2001: 167ff.), which appears from pottery and associated objects to be uniform in an essential set of components from the eastern coast of Arabia and parts of Iran to Syria, with related ceramics at the peripheries, has already led some scholars to suggest a greater complexity than is normally accepted in the Ubaid (Henrickson and Thuesen 1989). The spread of Ubaid material far beyond the south must be seen as reflecting movement of people, not just pots. Scholars tend to exaggerate the difficulties of moving goods and people in the ancient world. It should be remembered that on a clear day one can see the entire landscape from Nippur to the first three ranges of the Zagros, and that the distance can be walked in a few days. Also, before modern transportation, caravans (of camels, but also with horses and donkeys) moved at a walking pace from Zubair in southern Iraq to Aleppo in forty days or so (Carruthers 1929). The trip by raft down the Tigris from Birijik to Fallujah could take as few as twelve days (British Admiralty War Staff 1916). Given such relative ease of movement, the occurrence of Ubaid pottery in Syria and Anatolia need not be explained as natural developments out of local traditions as a result of the adoption of a tournette, as Nissen has suggested (2001: 167–69). It does not get us very far to see the pottery of Tepe Gawra, for instance, as a self-derived product (even though it may be made by local potters continuing a craft specialization from the Halaf) when many shapes and decorations are clearly derived from southern prototypes, and some are peculiar (tortoise vessels) and occur in sacred contexts at Gawra, as they did at Eridu. Equally, one cannot ignore the plans and decoration of the public buildings at Gawra, which are clearly derived from the south. There are not just minor sites in the north with a little Ubaid pottery on them, but large sites such as Zeidan, at the confluence of the Balikh and the Euphrates, which is covered with Ubaid sherds of at least the third and fourth phases. I was able to observe Ubaid sherds as far down in the mound as 3 or 4 m.

I admit that we have too little evidence to present a convincing case, but we have to use the durable artifacts that are available, namely, the remnants of pottery and other artifacts that we can identify as being of southern or of northern origin. In my conception, during the Ubaid 3 and 4 periods, the contact between the south and north would have been unequal, with a more complex south affecting a less complex north. This is not to say that there were not developments of complexity in the north, such as that implied by the spread and duration of the Halaf culture, settlements of which are found as far south as the Hamrin. We should be re-examining the Halaf in terms of early kingship also. But by Ubaid 3 and 4, the thrust was from the south. Whereas the southern Ubaid artifacts and ideas went north (as well as east and south), as evidenced in numerous artifacts, building types, and even settlement, objects native to the northern areas are very rare in southern sites (e.g., Pittman 2001: 442). In my view, the contact through trade in the Ubaid sparked more complexity in the local northern groups, which, by at least the Late Chalcolithic 3, developed their own compact settlements of up to 15 ha, their own types of administrative devices — the northern styles of stamp seals, made of bone and stone — and their own works of art (e.g., sitting bears, "eye idols"), as well as formal buildings and defensive walls, as seen at Hamoukar and Brak.

Nissen has asserted that the Uruk expansion was a renewal of the Ubaid trading network (2001: 167). Ubaid merchants, like their descendants, most probably traded primarily in textiles and other finished goods for raw materials and other kinds of finished goods. The southerners wanted timber and perhaps even wool, but they definitely wanted obsidian and flint/chert. The baked clay sickles, clay hoes, and other implements made in southern Iraq in the Ubaid and the Uruk periods were, I propose, a response to the inability of merchants to supply enough raw materials to satisfy a burgeoning market that was itself a reflection of increased development in complexity. Tony Wilkinson (pers. comm.) has pointed out that around Hamoukar on surveyed sites that had southern pottery (Ubaid, Late Chalcolithic 4–5, Akkadian), there was a much greater proportion of flint than obsidian, while on sites with no southern sherds (Late Chalcolithic 2–3, Ninevite V), there was much more obsidian. The intrusion and dominance of southerners in those three periods in northeastern Syria seem to have distorted the normal trading patterns, blocking transhumant herders from coming down from the Zagros into the Hamoukar area with obsidian to trade. Perhaps the southerners preferred flint to obsidian and thus reduced the market for obsidian. The flint may have come from an area other than that one supplying obsidian, an area within the Ubaid sphere of trade, so it was preferred. Finally,

oi.uchicago.edu

the necessity to create baked clay substitutes for stone-bladed tools may have reflected a blocking of the southerners from source areas of both obsidian and flint.

Many of the research questions that have been asked of the Uruk expansion should now be asked of the Ubaid, not just the question of kings versus chiefs. Objections will be raised that the Ubaid does not show the settlement hierarchies that have been linked to state formation. But are settlement hierarchies really a requisite for social hierarchies, or are they the artifacts of secondary or tertiary formations, appearing long after the state has come into being? Ethnographically, it can be shown that the shift to kingship is a fairly easy and common one, often associated with a crisis. Adams is dealing with such shifts when he states (Yoffee and Cowgill 1988: 24) that "the elaborations of social hierarchies were of more decisive importance than an expansion in scale" in the context of discussing how inequalities in social groups tend to bring about elites with aggressive tendencies, "tending to separate from their communities as they grow authoritarian … [and] imposing new, centralized controls over old ones." In this instance Adams is returning to one of his central themes, expressed first in an early article (1955), in which he emphasized the change in the role of a chief from a consensus figure to one of authority as the critical shift in the development of what we would now call complexity. His thinking was influenced by, among others, Jacobsen (1957) and Robert Fernea (1970). Fernea showed by anthropological fieldwork conducted in the 1950s, that a traditional shaykh (a consensus figure) was under pressure to take real power over his tribe because the state wanted to deal with only one responsible person in the group. Adams also cited Rosenfeld's seminal article on the achievement of kingship by Ibn Rashid in early twentieth-century Arabia (1965). Here, it was not state interference that made the difference, but accidents of survival of brothers, and the organization of a group of non-kin to act as a force that the shaykh could use even against his own kin; with this independent force, he gained real power so that he could include or exclude kin as he wished. Jacobsen (1957) was seeing in ancient Mesopotamian records reflections of tribal councils that, facing crisis, appointed a war leader to real power, who then through circumstances, cleverness, or mere force, cemented that power to become a king. Whether kings can pass on the power to their successors, and how long the kingdom can survive is another matter. There are probably far more failed kingdoms than successful ones in the history of the world. In order to make the shift to king, we have to assume some kind of stable economic base, a certain level of population, some specialization of tasks, and some inequalities in abilities. Such features occur in all human groups, small and large, even nuclear families, but it is probable that many times, even in the early Neolithic, chiefs could take on real power and thereby became kings. The key element in the taking of real power would have been the sanctioned ability of the king to order executions without creating blood feud. Such an ability depends not so much on the acquiescence of the ruled, but the existence of a force that answers to the king, not to kinship groups. But since structures of dominance and dependency, social hierarchy, social and economic regulation, persuasion, and an accepted means of legitimation (e.g., the co-opting of the religious specialists) had to be elaborated and brought into use to bolster kingship, it was probably not until the late Ubaid or Uruk that kings could make the transition from chief and maintain the position and hand it on. Information storage beyond human memory, in the guise of clay tablets, was not part of the first achievement of complexity, but seems to have marked a second stage.

In the fieldwork and synthesis that is being done and will be done on the rise of the state/complexity/civilization, there must be a curious hole in the research fabric: no-one can do anything in Iraq for the foreseeable future. Just as with the Uruk debate, the Ubaid discourse, with new material only from the countries around Iraq, will be like trying to characterize London by investigating Durham, Dublin, the Shetlands, Gibraltar, and Leighton Buzzard. I would ask that we remember the ancient Iraqi Londons as we dig the Syrian and Anatolian outbacks.

BIBLIOGRAPHY

Adams, Robert McC.

1955 "Developmental Stages in Ancient Mesopotamia." In *Irrigation Civilizations: A Comparative Study*, edited by J. H. Steward, pp. 6–18. Washington, D.C.: Pan American Union.

1972 "The Urban Revolution in Lowland Mesopotamia." In *Population Growth: Anthropological Implications*, edited by B. Spooner, pp. 60–62. Cambridge: MIT Press.

1974 "Anthropological Perspectives on Ancient Trade." *Current Anthropology* 15: 239–58.

oi.uchicago.edu

1975 "The Emerging Place of Trade in Civilizational Studies." In *Ancient Civilization and Trade*, edited by J. A. Sabloff and C. C. Lamberg-Karlovsky, pp. 451–65. Albuquerque: University of New Mexico Press.

1978 "Strategies of Maximization, Stability and Resilience in Mesopotamian Society, Settlement and Agriculture." *Proceedings of the American Philosophical Society* 122: 329–35.

1981 *Heartland of Cities: Surveys of Ancient Settlement and Land Use on the Central Floodplain of the Euphrates*. Chicago: University of Chicago Press.

1996 *Paths of Fire: An Anthropologist's Inquiry into Western Technology*. Princeton: Princeton University Press.

1997 "Social Contexts of Technology." *Social Research* 64: 947–64.

2004 "Reflections on the Early Southern Mesopotamian Economy." In *Archeological Perspectives on Political Economies*, edited by G. M. Feinman and L. M. Nicholas, pp. 41–59. Salt Lake: University of Utah Press.

Algaze, Guillermo

1986 Mesopotamian Expansion and Its Consequences: Informal Empire in the Late Fourth Millennium B.C. Ph.D. dissertation, University of Chicago.

1993 *The Uruk World System: The Dynamics of Expansion of Early Mesopotamian Civilization*. Chicago: University of Chicago Press.

2001 "The Prehistory of Imperialism." In *Uruk Mesopotamia and Its Neighbors: Cross-Cultural Interactions in the Era of State Formation*, edited by M. S. Rothman, pp. 27–83. Santa Fe: School of American Research Press.

2007 "The Sumerian Takeoff." In *Settlement and Society: Essays Dedicated to Robert McCormick Adams*, edited by E. C. Stone, pp. 343–68. Los Angeles: Cotsen Institute of Archaeology; Chicago: The Oriental Institute.

British Admiralty War Staff Intelligence Division

1916 *A Handbook of Mesopotamia*. 4 volumes. London: The Division.

Carruthers, Douglas

1929 *The Desert Route to India*. Works Issued by the Hakluyt Society, 2nd Series, No. 634. London: Hakluyt Society.

Childe, V. Gordon

1950 "The Urban Revolution." *Town Planning Review* 2: 3–17.

Courty, Marie-Agnes, and Harvey Weiss

1997 "The Scenario of Environmental Degradation in the Tell Leilan Region (N.E. Syria) during the Late Third Millennium Abrupt Climate Change." In *Proceedings of the NATO-ARW Workshop on Third Millennium B.C. Abrupt Climate Change and Old World Social Collapse*, edited by N. Dalfes, G. Kukla, and H. Weiss. Berlin/Heidelberg: Springer.

Cullen, H. M.; P. B. deMenocal; S. Hemming; G. Hemming; F. H. Brown; T. Guilderson; and F. Sirocko

2000 "Climate Change and the Collapse of the Akkadian Empire: Evidence from the Deep Sea." *Geology* 28: 379–82

D'Altroy, T. A.

2001 "A View of the Plains from the Mountains: Comments on Uruk by an Andeanist." In *Uruk Mesopotamia and Its Neighbors: Cross-Cultural Interactions in the Era of State Formation*, edited by M. S. Rothman, pp. 403–43. Santa Fe: School of American Research Press.

Deimel, Anton

1920 *Die Reformtexte Urukaginas*. Orientalia 2. Rome: Orientalia Special Publication.

1931 *Sumerische Tempelwirtschaft zur Zeit Urukaginas und seiner Voregänger*. Analecta Orientalia 2. Rome: Pontifical Biblical Institute.

Diakonoff, I. M.

1969 "The Rise of the Despotic State in Ancient Mesopotamia." In *Ancient Mesopotamia: Socio-Economic History*, edited by I. M. Diakonoff, pp. 173–203. Moscow: Nauka Publishing House, Central Department of Oriental Literature.

oi.uchicago.edu

1974 "Structure of Society and State in Early Dynastic Sumer." *Monographs of the Ancient Near East* I/3: 1–16.

Falkenstein, A.

1954 "La Cité Temple sumérienne." *Journal of World History* 1: 784–814.

1974 *The Sumerian Temple City*. Malibu: Undena Publications.

Fernea, Robert A.

1970 *Shaykh and Effendi: Changing Patterns of Authority Among the El Shabana of Southern Iraq*. Cambridge: Harvard University Press.

Foster, B.

1981 "A New Look at the Sumerian Temple State." *Journal of the Economic and Social History of the Orient* 24: 225–41.

Gelb, Ignace J.

1969 "On the Alleged Temple and State Economies in Ancient Mesopotamia." *Studi in onore di Edoardo Volterra* 6: 137–54.

Gibson, McGuire

2000 "Tell Hamoukar: Early City in Northeastern Syria." *Antiquity* 74: 477–78.

Gibson, McGuire; Amr al-Azm; Clemens Reichel; Salam al-Quntar; Judith A. Franke; Lamya Khalidi; Carrie Hritz; Mark Altaweel; Coleen Coyle; Carlo Colantoni; Jonathan Tenney; Ghassan A. Aziz; and Tobin Hartnell

2002 "Hamoukar: A Summary of Three Seasons of Excavation." *Akkadica* 123: 11–34.

Henrickson, Elizabeth F., and Ingolf Thuesen, editors

1989 *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Huot, Jean-Louis

1991 *'Oueili: Travaux de 1985*. Paris: Éditions recherches sur les civilisations.

Jacobsen, Thorkild

1943 "Primitive Democracy in Ancient Mesopotamia." *Journal of Near Eastern Studies* 2: 159–72.

1957 "Early Political Developments in Mesopotamia." *Zeitschrift für Assyriologie* 52: 91–140.

Jasim, Sabah A.

1985 *The 'Ubaid Period in Iraq: Recent Excavations in the Hamrin Region*. British Archaeological Reports, International Series 267. Oxford: British Archaeological Reports.

Lehner, Mark

2000 "The Fractal House of Pharaoh: Ancient Egypt as a Complex Adaptive System." In *Dynamics in Human and Primate Societies: Agent-Based Modeling of Social and Spatial Processes*, edited by T. A. Kohler and J. Gummerman, pp. 275–353. Oxford: Oxford University Press.

Lloyd, Seton, and Fuad Safar

1943 "Tell Uqair: Excavations by the Iraq Government Directorate of Antiquities in 1940 and 1941." *Journal of Near Eastern Studies* 2: 131–58.

Maekawa, K.

1973–1974 "The Development of the é-mi in Lagash during Early Dynastic III." *Mesopotamia* 8–9: 77–144.

1987 "Collective Labor Service in Girsu-Lagash: The Pre-Sargonic and Ur III Periods." In *Labor in the Ancient Near East*, edited by M. Powell, pp. 49–71. New Haven: American Oriental Society.

Nissen, Hans J.

2001 "Cultural and Political Networks in the Ancient Near East during the Fourth and Third Millennia B.C." In *Uruk Mesopotamia and Its Neighbors: Cross-Cultural Interactions in the Era of State Formation*, edited by M. S. Rothman, pp. 149–79. Santa Fe: School of American Research Press.

Pittman, Holly

2001 "Mesopotamian Intraregional Relations Reflected through Glyptic Evidence in the Late Chalcolithic 1–5 Periods." In *Uruk Mesopotamia and Its Neighbors: Cross-Cultural Interactions in the Era of State Formation*, edited by M. S. Rothman, pp. 403–43. Santa Fe: School of American Research Press.

oi.uchicago.edu

Rosenfeld, H.
1965 "The Social Composition of the Military in the Process of State Formation in the Arabian Desert." *Journal of the Royal Anthropological Institute of Great Britain and Ireland* 91: 75–86, 174–93.

Schneider, Anna
1920 *Die Anfänge der Kulturwirtschaft: Die sumerische Tempelstadt*. Essen: Baedeker.

Stein, Gil J.
1994 "Environmental Instabilities and Urban Origins." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein, M. S. Rothman, and S. Mitchell, pp. 121–51. Monographs in World Archaeology 18. Madison: Prehistory Press.
1998 "World Systems Theory and Alternative Modes of Interaction in the Archaeology of Culture Contact." In S*tudies in Culture Contact: Interaction, Culture Change and Archaeology*, edited by J. G. Cusick, pp. 220–55. Occasional Paper 25. Carbondale: Center for Archaeological Investigations, Southern Illinois University.
1999 *Rethinking World-Systems: Diasporas, Colonies, and Interaction in Uruk Mesopotamia*. Tucson: Arizona University Press.

Stein, Gil J., and Mitchell S. Rothman, editors
1994 *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*. Monographs in World Archaeology 18. Madison: Prehistory Press.

Weiss, Harvey
2000 "Causality and Chance: Late Third Millennium Collapse in Southwest Asia." In *La Djezire et l'Euphrate Syriens de la protohistoire à la fin du II^e millénaire av. J.-C.: Tendances dans l'interprétation historique des données nouvelles* (1993), edited by O. Rouault and M. Wäfler, pp. 207–17. Subartu 7. Turnhout: Brepols.

Weiss, Harvey, and Marie-Agnes Courty
1993 "The Genesis and Collapse of the Akkadian Empire: The Accidental Refraction of Historical Law." In *Akkad: The First World Empire*, edited by M. Liverani, pp. 131–55. Padua: Sargon.

Weiss, Harvey, and R. S. Bradley
2001 "What Drives Societal Collapse?" *Science* 291, no. 5504: 609–10.

Wittfogel, Karl A.
1957 *Oriental Despotism: A Comparative Study of Total Power*. New Haven and London: Yale University Press.

Yoffee, Norman
1993 "Too Many Chiefs? (Or Safe Texts for the 90s)." In *Anthropological Theory: Who Sets the Agenda?*, edited by N. Yoffee and A. Sherratt, pp. 60–78. Cambridge: Cambridge University Press.

Yoffee, Norman, and George L. Cowgill
1988 *The Collapse of Ancient States and Civilizations*. Tucson: University of Arizona Press.

oi.uchicago.edu

7

PRACTICES OF DAILY LIFE IN FIFTH-MILLENNIUM B.C. IRAN AND MESOPOTAMIA

SUSAN POLLOCK, *Binghamton University and Freie Universität Berlin*

Over the years archaeologists have remarked on the large geographical area over which characteristic Ubaid sites and material culture are to be found, from eastern Anatolia to southern Iraq and into western and southern Iran[1] (e.g., Nissen 1988: 46; Henrickson and Thuesen 1989; Roaf 1990). Attempts at understanding these overarching similarities have led some scholars to speak of an interaction sphere or an Ubaid expansion, the latter with an implied comparison to the "Uruk expansion" (Thuesen 1989; Frangipane 2001; Nissen 1989, 2001; Akkermans and Schwartz 2003: 154–80). At the same time, there has been a growing insistence on the local character of specific assemblages, attributed by some researchers to ethnic distinctions (Breniquet 1989) and by others to a variety of social and economic interactions linking people in different regions (Henrickson 1989).

These discussions point to a fundamental question: How do we assess and interpret similarities in material culture across space? (See other contributions to this volume, especially Karsgaard.) Our vocabulary points up the problems: we use labels such as "Ubaid" and "Ubaid-related," and most of us — myself included — vacillate uncomfortably among terms such as "society," "tradition," "culture," and "phenomenon." This issue is by no means unique to the Ubaid period; indeed, it has underlain some of archaeology's chief preoccupations since the early days of the discipline. I suspect that few archaeologists today would subscribe explicitly to the simplistic equation of people with pots (or other styles of material culture) that was popular in early twenieth-century European and American archaeology and advocated most perniciously by Kossinna (1911; for discussion, see Childe 1933; Kramer 1977; Kamp and Yoffee 1980; Emberling 1997; Trigger 2006: 241–48). We nonetheless remain to a surprising extent in the grip of rather naive and unsophisticated interpretations of material-culture similarities and differences. It should only require some very brief reflection to convince us that finding similar styles of objects in different places cannot be automatically assumed to imply cultural, ethnic, or linguistic connections.

Processual archaeology attempted to move the discipline beyond a preoccupation with formal similarities in artifacts and architecture by emphasizing the study of functional systems and their organization, in particular political, but also economic, organization. In the Ubaid case, processual approaches examined settlement patterns, degrees of specialization in the production of artifacts (especially pottery), and mortuary patterns, arguing for broad similarities in underlying sociopolitical organization across regions (Pollock 1983; Stein 1994; Wright 1994).

Attention to formal similarities and broad organizational frameworks have contributed to mapping out important elements for understanding the past, but they neglect a key dimension of social life: practices. As argued in a wide array of literatures in the social sciences in recent years, practices of daily life[2] — the "embodied, materially mediated arrays of human activity centrally organized around shared practical understanding" (Schatzki 2001: 2) or practical consciousness (Giddens 1984), that constitute peoples' daily lives and routines — are central to an understanding of the ways in which people both construct and are shaped by their social and material worlds (e.g., de Certeau 1984; Bourdieu 1990; Brumfiel 1991; Gosselain 1998; Bowser and Patton 2004; Hodder and Cessford 2004). Integral to the practices of daily life are the relations between people and objects: not only how objects are made and the social relations that underpin their production, but also the ways in which objects shape social relations and

[1] Not all scholars consider the Iranian material to belong to the Ubaid tradition, although most would probably accept a designation "Ubaid related." The distinctive phase terminologies used for Iranian sites (e.g., Susiana sequence, Bakun) are indicative of the tendency to separate them from the "classic Ubaid."

[2] By using the term "practices of daily life," I do not mean to confine this discussion strictly to those practices carried out every day. Rather, the term emphasizes the routine and "ordinariness" of these kinds of practices.

oi.uchicago.edu

social reproduction (Munn 1986; Appadurai 1986; Myers 2001; Meskell 2004; Miller 2005; Pollock and Bernbeck 2010) — for example, the ways in which cell phones and Internet-based forms of communication are restructuring the spatial and temporal characteristics of social interactions. Studies of daily practices can encompass a range of scales of inquiry, from an examination of the kinds of meals prepared and the composition and size of social groups that share them (my focus here), to an analysis of gestures (hand or other bodily movements) used in the painting of pottery (Castro Gessner 2008) or in the preparation of specific foods using repetitive motions (Molleson 2000).

Practices are shaped and shared, to a significant extent, in social contexts. As Marcel Mauss (1979 [1935]) long ago pointed out, the ways in which we go about the simplest and most unreflected everyday actions, such as sitting down or walking, are socially constructed rather than simply natural. Practices are also always limited by various structural constraints[3] that stem from the weight of past practices (traditions), thereby restricting future possibilities for practical action as well as limiting the possibilities open to people not to act in certain ways (Agamben 1999: 147). Structural constraints and practices exist in a dialectical relationship, with practices limited by structures/traditions and the latter arising out of the expectations derived from previous and current actions and decisions. A combination of practices and structural constraints is integral to the reproduction of social groups and relations, with reproduction depending upon myriad actions, large and small, reflected and unconscious, intentional and unintentional. In this sense, social reproduction does not depend principally on the decisions taken by the most politically or economically powerful sectors of society. Rather, it is a product of the constitution and intergenerational transmission of social relations and of the ways in which people interact with the material world that they live in and (in part) create.

These ideas point to the importance of examining the intricacies of daily practices in local contexts in order to understand the broad geographical similarities recognized as "Ubaid" as well as the distinctiveness of local and regional Ubaid manifestations. A focus on practices aims to identify the consequences, both intended and unintended, of people's decisions, strategies, and actions for their ways of life and how these ways of life shaped the possibilities for themselves and for others in the future.

The case study I use here, which examines food-related practices at three sites in two regions, is deliberately comparative. In this or any other comparative work, it is imperative to accord as much weight to differences between (and within) sites, assemblages, and regions as to their similarities (Wylie 1985; Stahl 1993; Bernbeck 1997: 101–04). Attentiveness to similarities and differences and to the intersections of practices and structural constraints yields some surprising results.[4]

In this brief paper, I limit my examination of practices of daily life to those associated with the preparation and consumption of food. These are crucial elements of day-to-day life in all societies. They are also particularly amenable to archaeological analyses of various kinds. Food-related practices encompass the acquisition of foodstuffs, food preparation (from grinding grain, to preparing dough, to cooking), and consumption. All the steps involved in turning raw foodstuffs into a meal may, and often do, involve numerous people, but it is the consumption of food that almost invariably takes place in social settings. Commensality, especially in contexts of daily food consumption (not just the special feasts that have captured so much archaeological attention in the last decade [Dietler and Hayden 2001; Bray 2003; Helwing 2003]), are usually deeply social occasions and are characterized by what Habermas (1984) has called communicative — as opposed to instrumental — action: talk that has no special aim, but which plays a significant role in reaching understanding and building and reproducing social relations. The specific kinds of foods eaten, how they are prepared, as well as contexts of commensality can be more or less infinitely elaborated, and their enormous plasticity allows them to play a role in a wide array of social relations: reinforcing or contesting everything from gender relations and social hierarchies to cosmological beliefs (Appadurai 1981; Bourdieu 1984; Atalay and Hastorf 2006). For all these reasons, food-related practices are an excellent place to begin to look at issues of social reproduction and the practices of everyday life.

[3] In the German-language literature, the term *Handlungsraum* offers an elegant way to conceptualize the notion of constraints on people's possibilities to act, yet avoids the rigid connotations that have come to be associated with the English term "structure" (van Dülmen 2000: 33). In the English-speaking literature, some archaeologists have opted for the term "tradition" to refer to a similar concept (Pauketat 2001).

[4] In a somewhat related vein, Bernbeck's (1994, 1995) detailed comparative analysis of Hassunan and Samarran settlements demonstrates that broad similarities in material culture and political organization may obscure fundamentally different kinds of socioeconomic structures.

oi.uchicago.edu

A CASE STUDY: CENTRAL MESOPOTAMIA AND SOUTHERN IRAN

The principal goal of this study is illustrative: to demonstrate the potentials of an approach that examines daily practices of food preparation and commensality. As a case study I use three villages in two geographically disparate regions within the "greater Ubaid tradition." Two of the sites, Tell Abada (Jasim 1985, 1989) and Tell Madhhur (Roaf 1984, 1989), are located in the Hamrin region of eastern Iraq. The material remains and general organizational features of these sites fit comfortably within the "classic" Ubaid tradition, and — apart from some differences attributable to temporal variation, such as the painted designs on pottery vessels — formal elements in artifacts and architecture from the two sites are strikingly similar. The third site I have selected for this comparative exercise is Tall-i Bakun (Langsdorff and McCown 1942; Alizadeh 2006), located in the Fars region of southern Iran, where the local fifth-millennium tradition is known as Bakun. Architecture and pottery decoration in the Bakun region are distinct and cannot be confused with standard Ubaid. Nonetheless, the heavy reliance on black-on-buff, finely painted, high-fired pottery that was finished on a slow wheel, as well as the use of stamp seals and sealings, show clear links to a broader Ubaid technological tradition of which these technological features form a defining part. For both regions, processually oriented studies have been used to argue for some sort of ranked sociopolitical organization (Pollock 1983; Stein 1994; Alizadeh 1988).

The selection of these three sites allows two quite different comparative possibilities: on the one hand, between two settlements that share very similar architecture and artifacts and are geographically close to each other (approximately 30 km apart), and on the other hand, between sites that are geographically distant and exhibit numerous formal dissimilarities within an overarching sphere of broad technological and organizational parallels. There is substantial published data on architecture and pottery from all three sites. At Abada an extensive portion of the ancient village was excavated. I focus here primarily on the best-preserved remains, from levels I and II. The evidence from Madhhur comes primarily from a single house in level 2 that was well preserved by burning, offering a rare chance to examine a ceramic assemblage more or less in situ. Excavations at Tall-i Bakun A uncovered a partially burnt village neighborhood that yielded numerous artifacts in situ in two levels (III–IV) of occupation.

Chronologically, both Bakun A III–IV and the Madhhur level 2 house can be attributed to Late Ubaid (Ubaid 4). The latest building phase at Abada, level I, has been dated to Ubaid 2/3, and the temporal interval between levels I and II seems to be relatively brief (Jasim 1985: 169–71, fig. 268). That said, it is important to bear in mind that the absolute chronology for all this material remains poorly specified, and a larger project to address the issues raised here would certainly have to grapple more systematically with the question of temporal change (see Campbell this volume).

Two additional caveats are necessary. First, an investigation of practices of daily life is an enormous topic, and I touch here on one (fragment of a) single component of such practices. In that respect, this study does no more than offer a glimpse of what such a project might look like. Second, it is almost impossible to say much about the types, or range of types, of foods prepared and consumed. In addition to the limited number and scope of reports on plant and animal remains from Ubaid and Ubaid-related sites, there have been, to my knowledge, almost no residue analyses or vessel usewear studies that could offer insights into the specific ways in which pottery containers — the most ubiquitous category of artifacts associated with food preparation and consumption — were used. Instead, I concentrate on the general usages of pottery vessels and the social contexts of food preparation and consumption.

To examine food-related practices, I concentrate on the use of space, especially the locations of food-preparation activities and food consumption, and on the locations and uses of pottery. I examine spatial layouts and circulation patterns within houses, especially with reference to architectural elements, features, and, where published evidence permits, in situ artifacts. It is unfortunate that the analysis of microdebris, which often offers the best, or sometimes the only, data on the primary activities that took place in particular locations, has seldom been conducted on Ubaid-period sites (cf. Metcalfe and Heath 1990; Rainville 2005; Hodder and Cessford 2004; Saeedi 2006, 2010).

An analysis in which pottery plays a substantial part has a major advantage in that the vast majority of excavated artifacts from fifth-millennium sites is pottery. However, in this period, as well as in many others, pottery can tell us about only some aspects of food preparation and consumption. When we look closely at the array of vessel forms that characterize most later Ubaid and Ubaid-related assemblages, it is clear that pottery containers were produced primarily to hold liquid and semi-liquid items (as well as to store large quantities of produce such as grain) — there is a notable absence of plate-like vessels (see Karsgaard this volume). Although our notions of what particular vessel shapes are used for need not correspond exactly to those of people living 7,000 years ago, the emphasis on cer-

oi.uchicago.edu

tain basic forms and absence of others should alert us to the likelihood that some — perhaps many — facets of food preparation and consumption did not entail the use of pottery or perhaps any other kinds of vessels.

A second problem one encounters when undertaking an inter-site analysis of pottery is the fundamental incomparability of many published ceramic assemblages. While there are occasional examples in which a full assemblage has been published, or at least where it is possible to ascertain what portion is documented statistically and in illustrations (e.g., Dollfus 1975, 1983a, 1983b; Wright 1981; Roaf 1989), the far more common procedure has been to illustrate and describe an unspecified selection of vessels and sherds. If the goal is to talk about everyday practices in which vessels were used, then it is crucial to be able to ascertain proportions of different shapes and sizes present in various contexts.

HAMRIN REGION

Ubaid houses at Tells Abada and Madhhur, as well as other Ubaid sites in the Hamrin region, typically consist of eight to fourteen rooms, with a central, T-shaped hall that may have been roofed in at least some cases (Roaf 1989: 92). A series of rooms extends along two sides of the central hall. Houses tend to be large, generally 100–200 sq. m. The largest room in the house is invariably the central hall. Houses are for the most part free-standing, so that their layout and configuration are generally independent of other buildings. Open spaces between buildings are of irregular shape and size, and sometimes contained various kinds of installations. It remains uncertain whether some

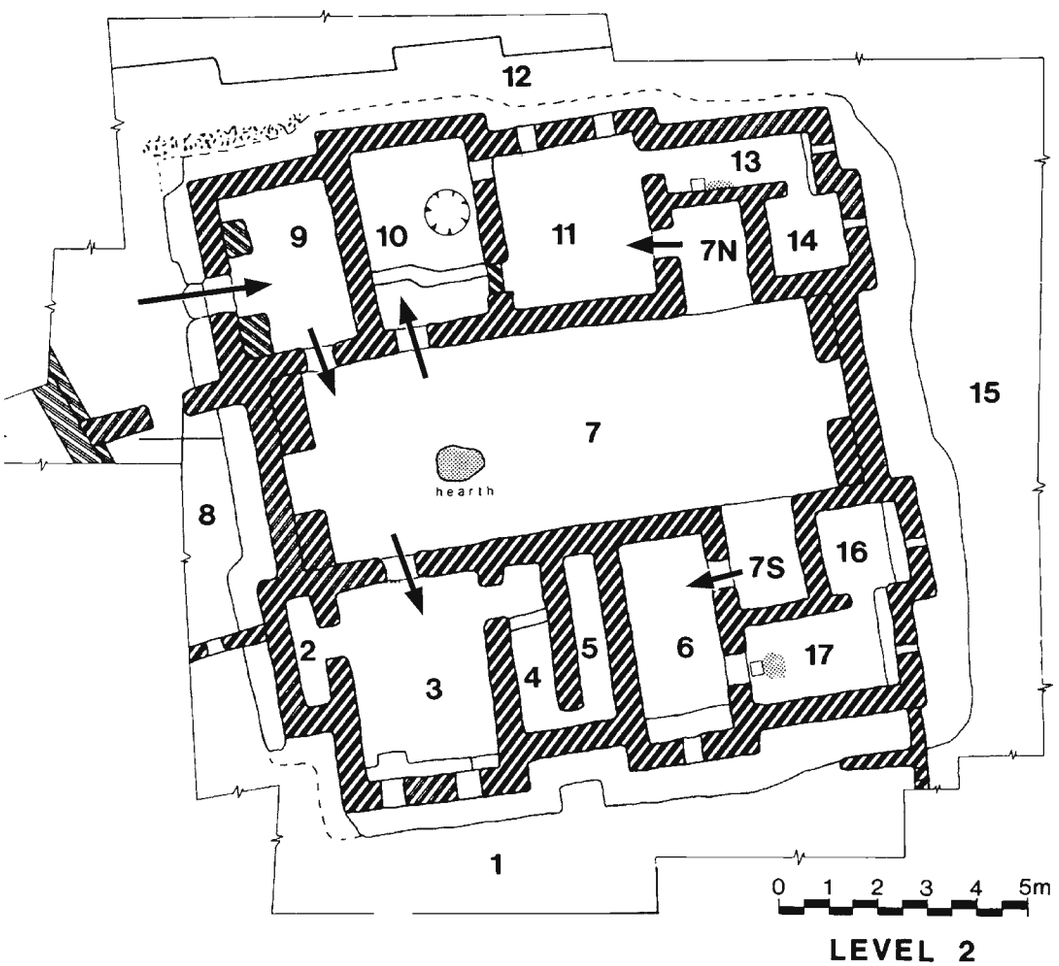


Figure 7.1. Plan of the burnt house at Madhhur. Arrows mark the doorway from outside and access routes from the central hall to other parts of the house (after Roaf 1989: fig. 1)

oi.uchicago.edu

or any houses had a second story (Forest 1987; Margueron 1987; Roaf 1989: 92–94), but there is ample evidence of staircases that led either to another story or to a roof. Various activities undoubtedly took place in those locations, of which we have only the most indirect indications.

Circulation patterns within houses constrained people's movements to very specific paths. At Madhhur, there was a single entrance to the house from outside (fig. 7.1). One entered a room that led via a bent-axis approach into the T-shaped hall. The central hall was the nodal point from which the largest number of other rooms in the house could be accessed. The preservation of most level I houses at Abada does not afford sufficient evidence to ascertain circulation patterns within them. The houses from level II, which are formally very similar to those of level I, have circulation patterns that are relatively similar to the Madhhur house, although there tends to be a greater variety of ways to move from one part of a building to another. Occasionally at Abada the entryway into a house led directly into the main hall, rather than through a separate entrance room, suggesting a greater openness to those outside the house (fig. 7.2). At both Abada and Madhhur, stone door sockets demonstrate that doors were used between some rooms, and, together with thresholds of stone or clay, they indicate that spaces within houses were clearly distinguished, with access and visibility restricted in various ways.

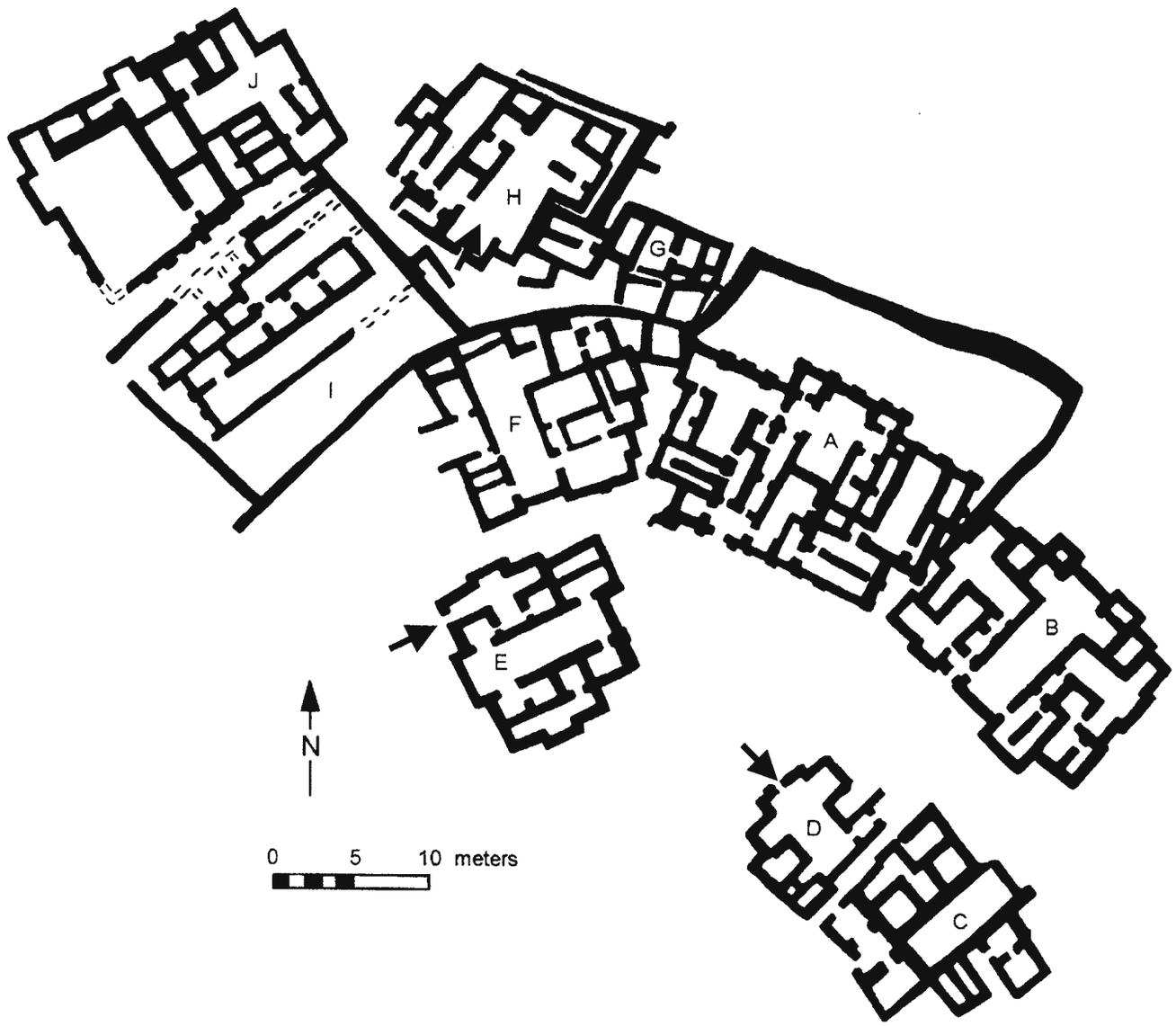


Figure 7.2. Plan of Abada, level II, with entries leading directly into T-shaped halls marked with arrows (after Jasim 1985: fig. 13)

oi.uchicago.edu

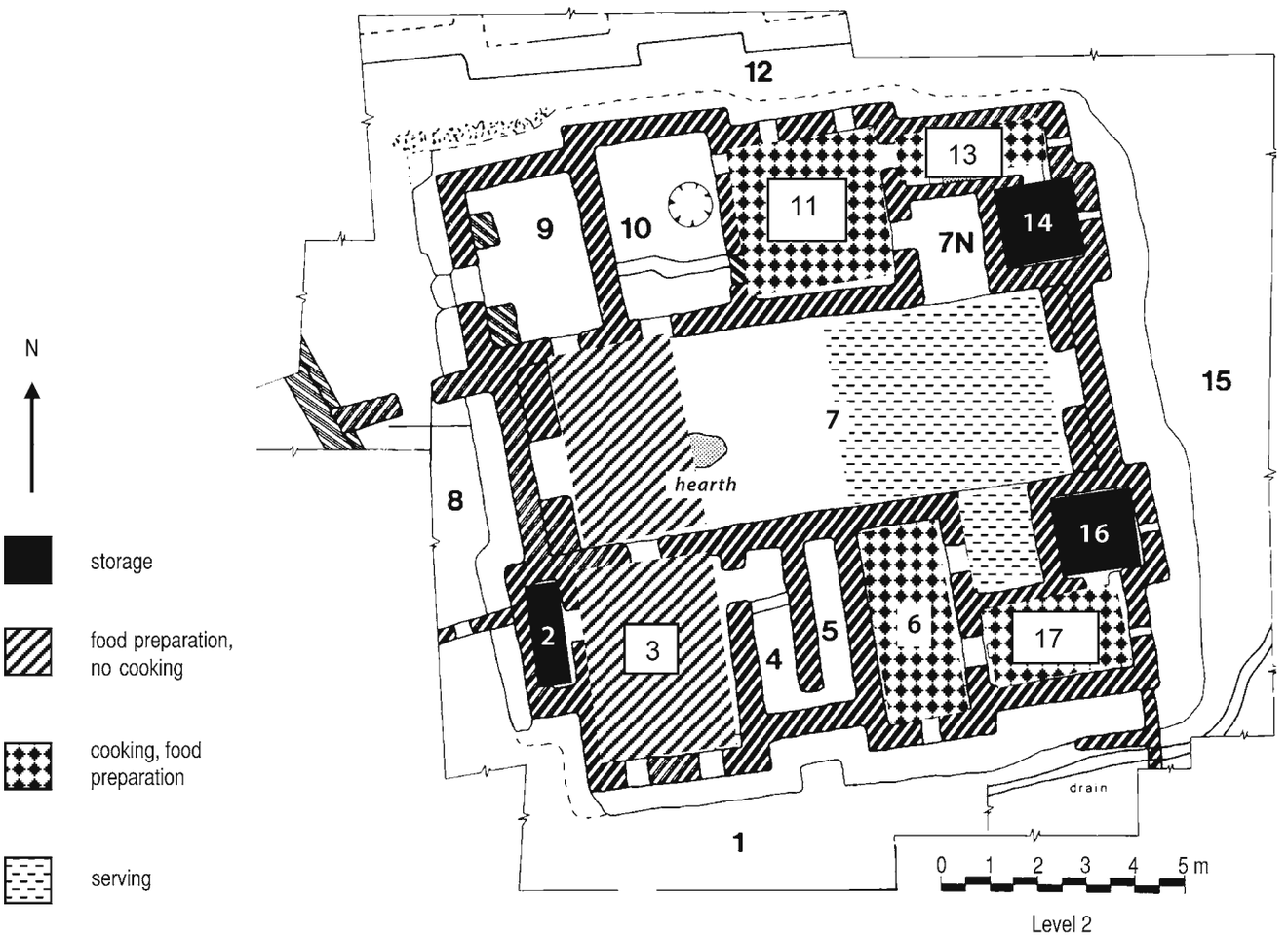


Figure 7.3. Plan of the burnt house at Tell Madhhur with areas of food-related activities indicated by shading

Based on the inventory of features and artifacts, it is possible to distinguish sets of activities that took place in different parts of the Madhhur house (fig. 7.3). My analysis is largely in agreement with the one conducted by Michael Roaf (1989), with a few differences in detail. Based on the array of pottery vessels, as well as other artifacts and features, adjoining rooms 11 and 13 to the north of the central hall, and adjoining rooms 6 and 17 to the south, were places for food preparation that involved cooking as well as the use of stored foodstuffs. The western end of the central hall was also an area of food preparation but one that did not include cooking — despite the hearth, there are no cooking pots — whereas the eastern end of the hall was a location where meals were eaten, as suggested by the preponderance of serving vessels there. The relatively large room 3, just off the central hall, seems to have been a storage area — perhaps of food to be processed in the adjacent western part of the central hall, judging by the substantial quantities of carbonized grain in this room — and perhaps also for some facets of food preparation but not cooking. A series of small back rooms (14, 16, and 2) were probably storage places, given their positions and sizes.

Although hearths were present, no ovens were located within the Madhhur house; however, ovens were found within buildings in the two subsequent levels (levels 3 and 4). The absence of an oven in the level 2 house means that residents most probably did some of their cooking outdoors, although whether they had access to an oven that was for neighborhood use, for the whole village, or for some other group cannot be specified. Nonetheless, it is clear that the burnt house was a locus of food storage and preparation, as well as consumption, with meals eaten in the central hall. The hall was large enough — approximately 11 × 4 m — to accommodate quite a few people, and its size, together with the wall paintings at its eastern end, make it a likely area for guests to have been welcomed and offered food and drink. Although the central hall was the primary node of circulation within the house, doorways were arranged so that it would have been difficult if not impossible for the guests or others sitting in the eastern end of the central hall to see into other rooms.

oi.uchicago.edu

The level of specificity with which activities can be pinpointed spatially in the Madhhur house cannot be matched with the data available for Abada. More information is available for level II than level I, and I consider those earlier patterns here, albeit with the acknowledgment that it is problematic to assume that they remained constant over time. As was the case for the Madhhur house, the Abada houses did not contain ovens; however, a cluster of bread ovens was located outdoors. Hearths were present in at least some of the houses and could have served for heating purposes as well as for some cooking tasks, as indicated by the occurrence of burnt bone and a burnt clay tripod with one of them. As at Madhhur, hearths in Abada houses were in some cases located in the central halls, in other instances in side rooms. In one case, a large jar and two querns were found in a room immediately adjacent to one containing a hearth, an arrangement also paralleled at Madhhur. Although the findspots of most artifacts are not specified, both grinding stones and cooking pots are said to be common in the T-shaped halls (Jasim 1985: 207), a notable contrast to Madhhur, where neither of these items occurred frequently in the central hall. Houses at Abada contained storage areas, including bins, large jars, and in level I a kind of grainstore comprising mats that was generally found in the central hall.

To summarize briefly, Madhhur and Abada share many close similarities in form, size, layout, circulation patterns, and the use of interior space. Apart from a tendency for the central halls at Abada to be more open to the outside — through the occasional presence of a doorway leading from the exterior of the house directly into the T-shaped hall — the primary difference in the use of space is the common presence of food-preparation tools (grinding stones and cooking pots) in the central halls at Abada, in contrast to their infrequent occurrence in that location at Madhhur.

Turning to the pottery, I have grouped the various vessel shapes distinguished by the excavators of Abada, Madhhur, and Bakun into a series of general forms. In doing so, I have emphasized those features that are likely to have been related to the functions of vessels — for example, size of the opening, deep versus shallow vessels — and ignored the kinds of formal differences that are the product of different local pottery traditions, temporal changes, and so forth (Henrickson and McDonald 1983; Smith 1985; Sinopoli 1991: 83–85). These latter include minor differences in rim morphology or in the contours of the vessel body that result from different habitual practices of making — rather than using — pottery vessels. In this way, I distinguish seven categories of open bowl forms and nine categories of jars, not all of which are represented at each site. In a series of steps, I combined those sixteen categories into five partially overlapping groups based on function: vessels whose shapes seemed best suited for cooking and food preparation, drinking, eating and/or drinking, pouring, and storage (table 7.1, figs. 7.4–5).

Table 7.1. Classification of vessel shapes into general functional categories

Functional Category	*Vessel Shape*	*Tall-i Bakun*	*Tell Abada*	*Tell Madhhur*
Cooking and Food Preparation	Cooking Pot	Type XIV,	Small, Globular Jar, Jar Type 12	Cooking Pot
	Squat Pot	Type VIII		
	Basin		Bowl types 16, 21	Deep Bowl
Drinking	Beaker	Types VI, XI	Beaker	Deep Bowl
	Deep Bowl	Type I		
Eating and/or Drinking	Deep Conical Bowl	Types III, V	Bowl Types 1–4, 6, 9, 18, 20, 22	Medium Bowl
	Hemispherical Bowl	Types II, IV		Shallow Bowl
	Wide Open Bowl		Bowl Types 5, 6, 16, 21	
	Shallow Open Bowl	Types III, XII	Bowl Types 7, 8, 19	
	Incurved Rim Bowl	Type VII	Bowl Type 17	
Pouring	Spouted Jar	—	Jar Type 6	Spouted Jar
Storage	Neckless and 4-Lug Jar	Types IX, X	Jar Types 1, 3	4-Lug Jar
	Globular Jar		Jar Types 4, 7, 11, 14	Simple Jar; Small Jar with Straight Neck

oi.uchicago.edu

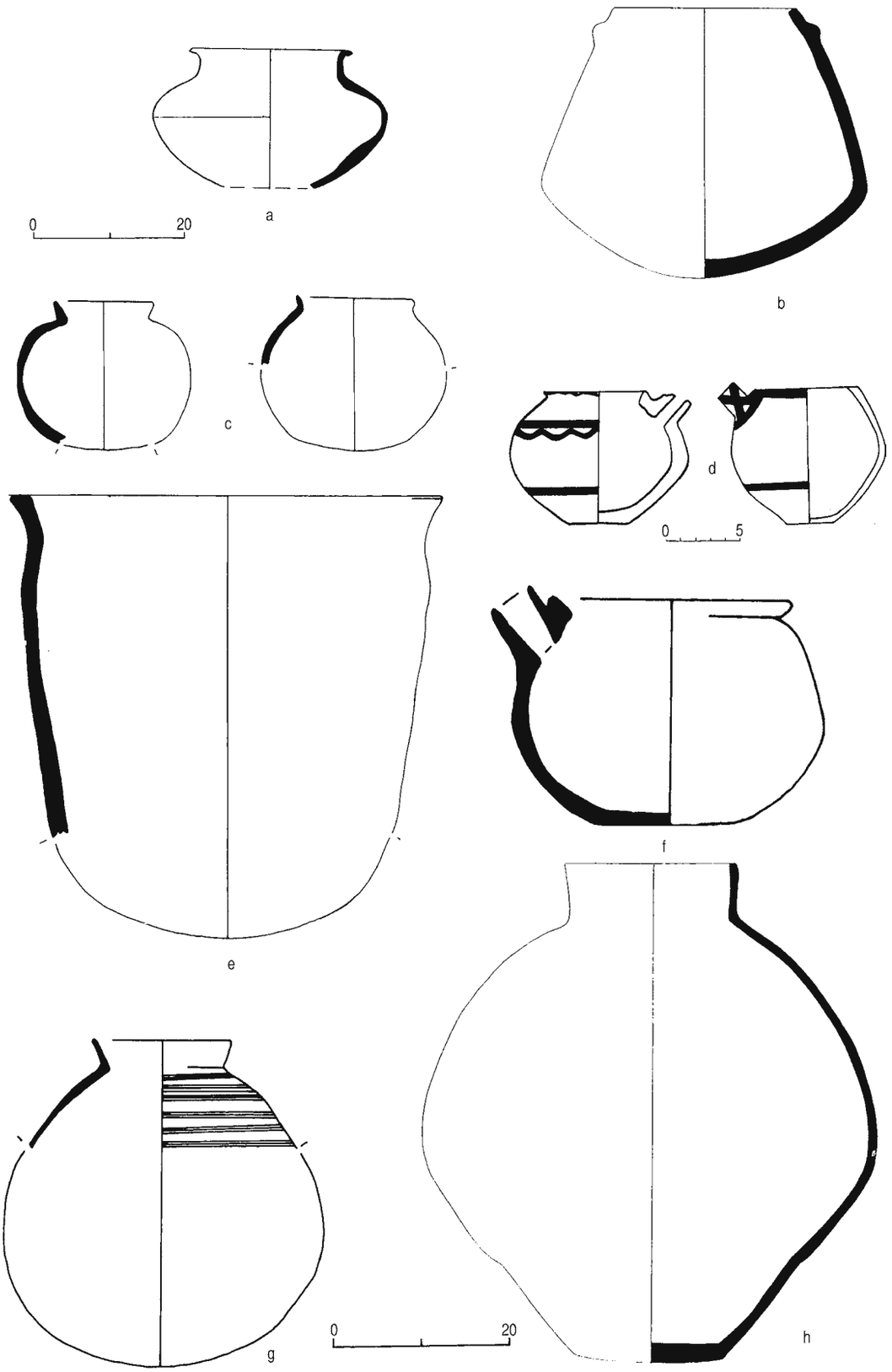


Figure 7.4. Vessels for cooking, food preparation, pouring, and storage. (*a*) Bakun A III, pl. 12:12; (*b*) Bakun A III, pl. 17:27; (*c*) Madhhur, fig. 7; (*d*) Abada level I, fig. 189 c–d; (*e*) Madhhur, fig. 6; (*f*) Madhhur, fig. 12; (*g*) Madhhur, fig. 8; (*h*) Bakun A III, pl. 14:13. Sources: Bakun: Langsdorff and McCown 1942; Abada: Jasim 1985; Madhhur: Roaf 1989. Scales are approximate

oi.uchicago.edu

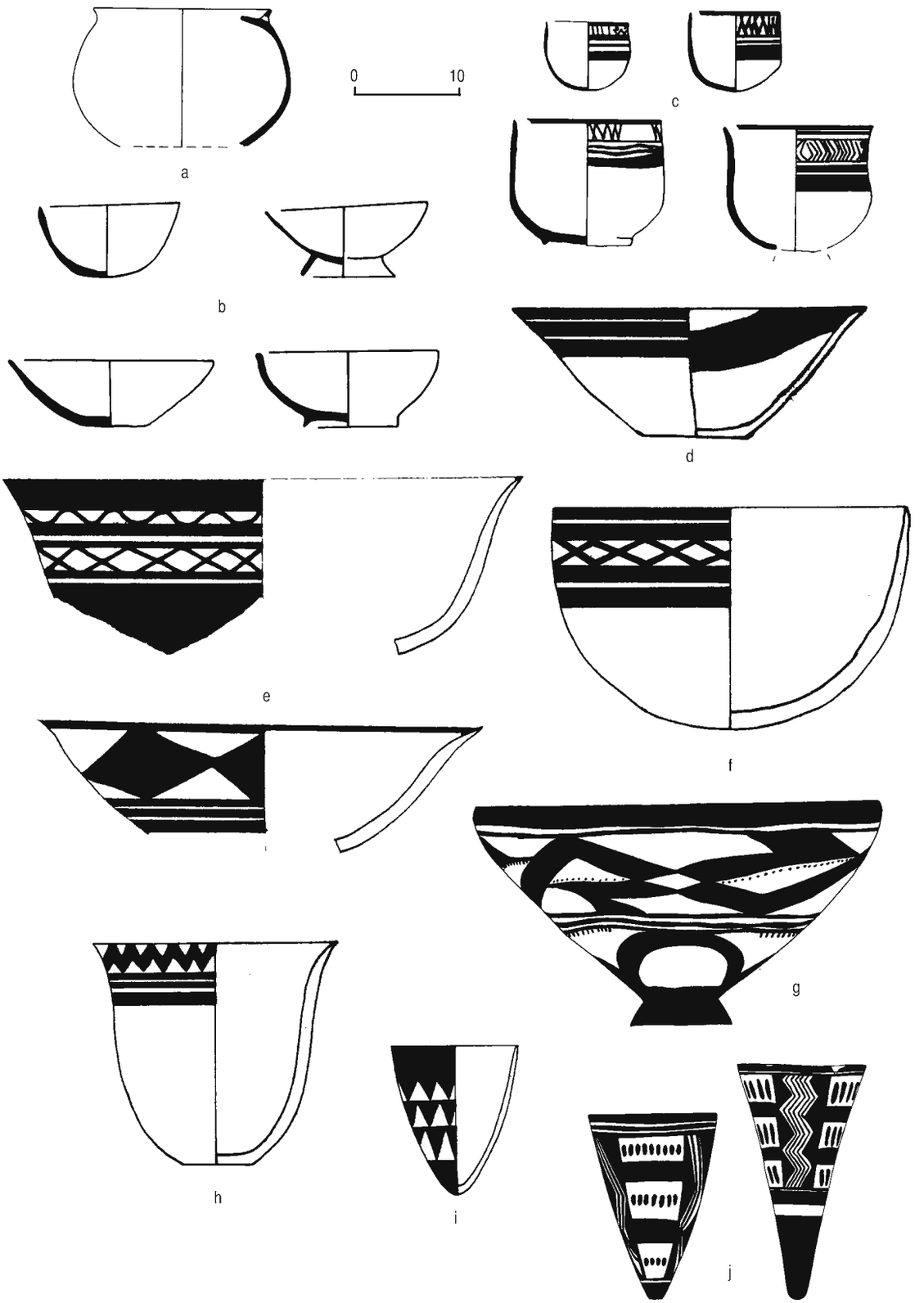


Figure 7.5. Vessels for eating and drinking. (*a*) Bakun A III, pl. 12:11; (*b*) Madhhur, fig. 3; (*c*) Madhhur, fig. 4; (*d*) Abada level I, fig. 164c; (*e*) Abada levels I–II, fig. 139d–e; (*f*) Abada level I, fig. 125b; (*g*) Bakun A III, pl. 54:10; (*h*) Abada level I, fig. 199b; (*i*) Abada level I, fig. 200c; (*j*) Bakun A III, pl. 36:13–14. Sources: Bakun: Langsdorff and McCown 1942; Abada: Jasim 1985; Madhhur: Roaf 1989. Scales are approximate

oi.uchicago.edu

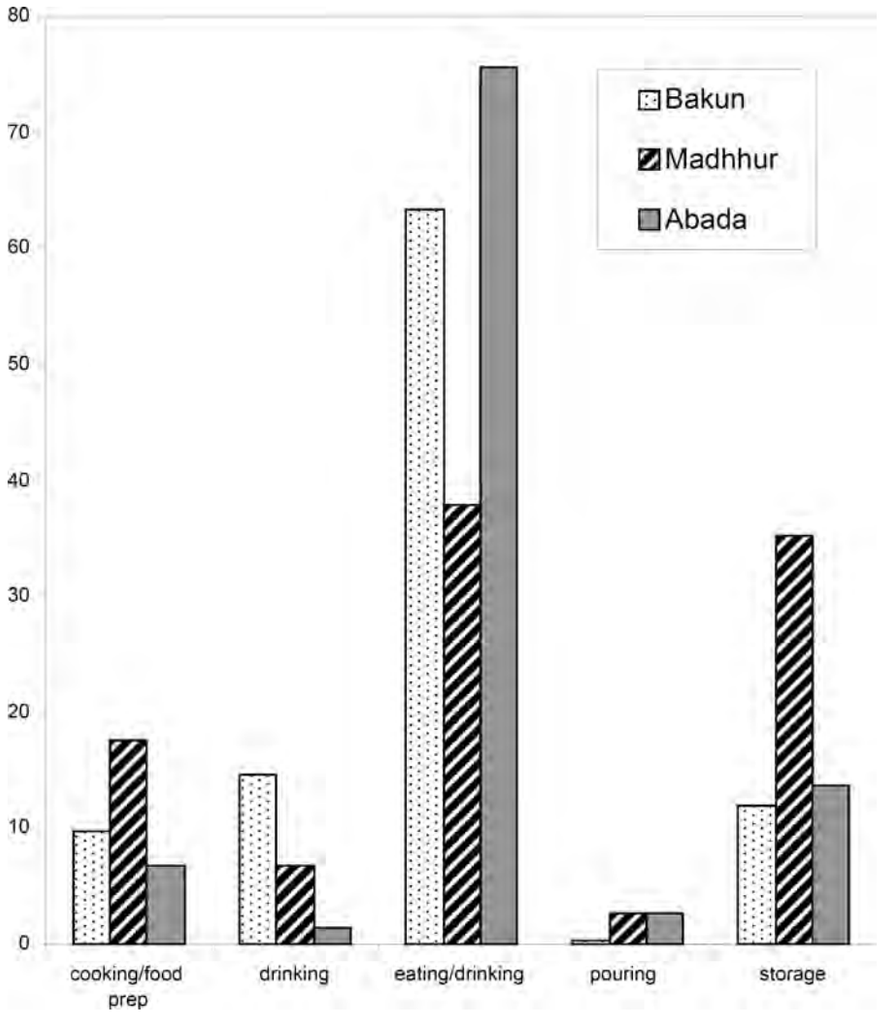


Figure 7.6. Proportions of different vessel categories at Abada, Madhhur, and Bakun

Examining the proportions of vessels in these five functional groups at Madhhur and Abada reveals some clear differences between the two assemblages (fig. 7.6). The Madhhur house contains a larger percentage of vessels used in cooking, food preparation, and storage, whereas at Abada the emphasis was principally on vessels used for eating or drinking, in other words, for direct food consumption.[5] These data imply that the residents at Abada may have stored food in other ways than in vessels, a suggestion already made by Jasim (1985: 207, 1989: 86), who noted the presence of bins and mat storage bundles. The larger proportion of food-preparation vessels at Madhhur — which corresponds to a lower proportion of serving containers — may be an indication that food preparation took place to a greater extent indoors, or that commensality was not limited to inside contexts. To decide between these possibilities would require the calculation of densities of vessels,[6] rather than percentages. Unlike percentages, where an increase in one category automatically leads to a decrease in one or more others, densities yield measures that are independent of one another (Wright, Miller, and Redding 1980; Pollock 1999).

The sizes of ceramic containers provide another indication of vessel uses. The preparation and/or serving of small quantities of food and drink for individual or small-group consumption implies different social relations than the making and consuming greater quantities of food by larger groups (Bernbeck, Costello, and Ünal 2004). An

[5] Because the published pottery from Tell Abada is a selective sample, without quantitative information on wares, there is the possibility that the higher proportion of serving vessels is the result of an emphasis on recording painted as opposed to plain pottery.

[6] Number of vessels (or sherds) per volume of deposit excavated.

oi.uchicago.edu

emphasis on single servings may allow or encourage differentiation among individual participants in a meal as well as a set allocation of portions. When food is consumed collectively by a group from larger serving vessels, there may be less differentiation among individual diners and more flexibility in serving sizes. In this way, a group that eats together forms a unit to which the addition or subtraction of a single individual makes little difference. Comparison of the sizes of eating/serving vessels at Abada and Madhhur, as indicated by rim diameters, shows that there are several size classes at both sites (fig. 7.7).[7] These size classes are quite similar, and in both cases the largest proportion — approximately two-thirds of the eating vessels — fall into the smallest size category (rim diameter less than 18 cm). It seems that the sizes of food portions and hence probably the size of the usual social units that consumed food were similar at the two sites.

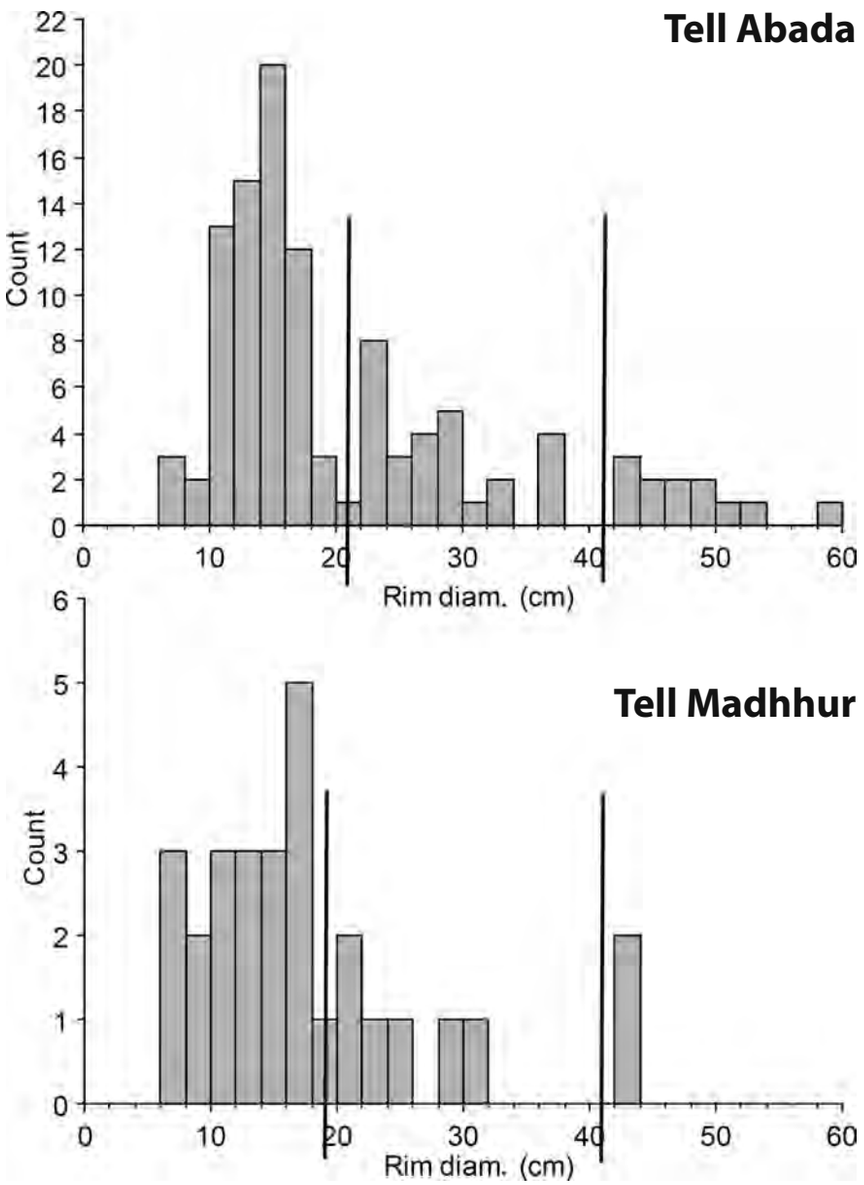


Figure 7.7. Rim diameters of eating/serving vessels from Tell Abada and Tell Madhhur. Vertical lines indicate the division between small, medium, and large vessels

[7] Roaf (1989) has calculated volumes of vessels at Tell Madhhur. This procedure is clearly preferable to the use of a single measurement such as rim diameter.

oi.uchicago.edu

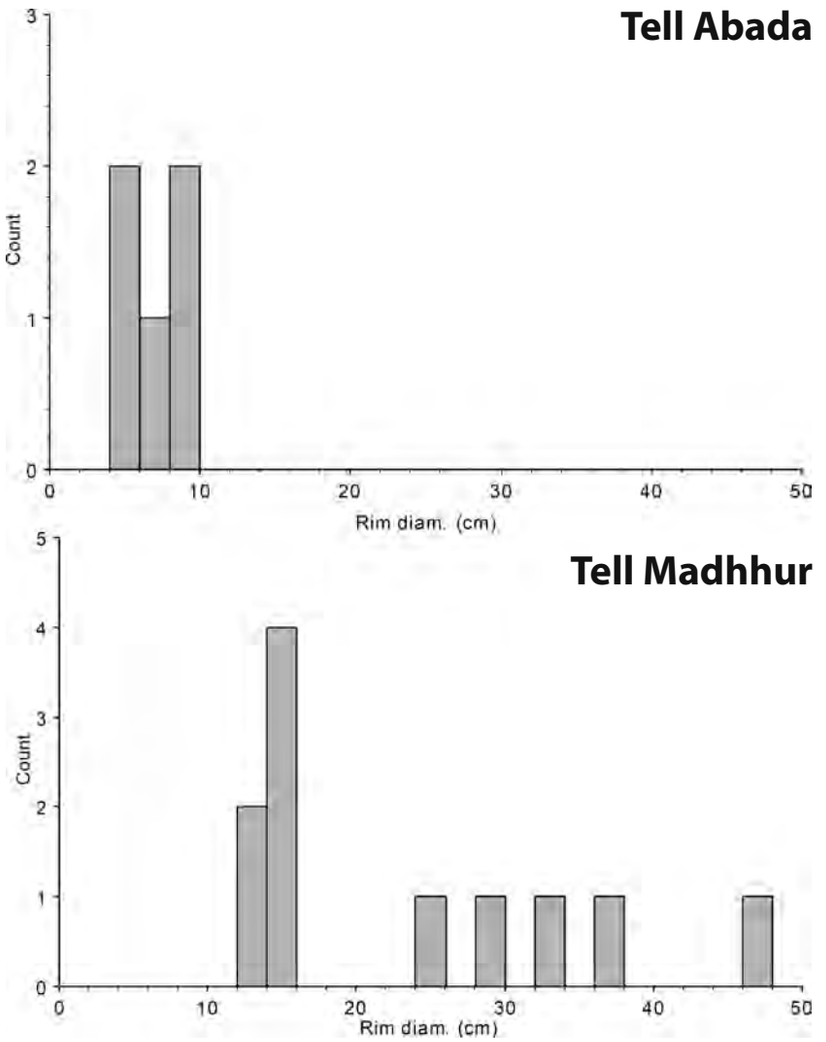


Figure 7.8. Rim diameters of food preparation vessels from Tell Abada and Tell Madhhur

A comparison of the sizes of food-preparation vessels shows a very different picture (fig. 7.8). All those from Abada are smaller — based on both rim and maximum diameters — than the examples from Madhhur. This suggests either distinct cooking/food preparation practices at the two sites, for example a form of preparation at Abada that often emphasized the use of containers other than ceramics, or a much greater emphasis on cooking small portions for smaller commensal groups at Abada.

TALL-I BAKUN

The Bakun tradition of fifth-millennium Fars is best known from the excavations at the eponymous site of Tall-i Bakun (Langsdorff and McCown 1942; Alizadeh 2006). In notable contrast to most "classic" Ubaid settlements, houses in the Bakun tradition typically consist of three to five rooms each (fig. 7.9). They lack central halls and generally share walls in an agglutinative fashion, with the precise layout of each house governed in part by the neighboring buildings. Houses almost invariably have a single entrance. Circulation within houses was strictly controlled, with generally only a single way to access each room and low, narrow doorways. The marked differences between the architecture documented at Bakun and that seen in the Hamrin point to distinct living arrangements, including different sizes and compositions of residential groups.

oi.uchicago.edu

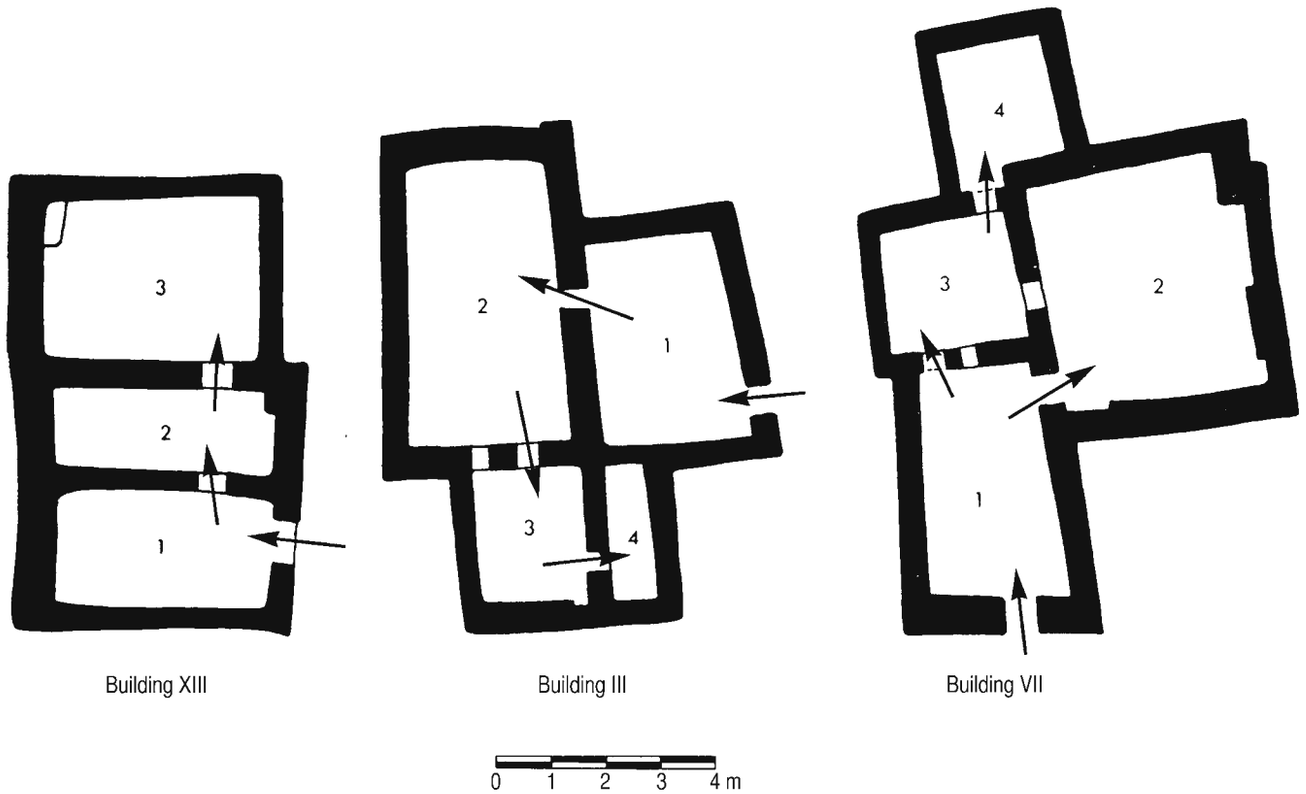


Figure 7.9. Examples of houses from Tall-i Bakun with entrances and access patterns indicated by arrows (after Alizadeh 1988: fig. 4)

None of the houses at Tall-i Bakun contained ovens; rather, as at Abada and Madhhur, ovens were located in outdoor areas. Hearths with hard-baked floors were found inside houses, as were "cooking holes," described by the excavators as ash-filled depressions (Langsdorff and McCown 1942: 12–13). As a result of their partial destruction by fire, houses contained substantial inventories of artifacts — including grinding stones, flint blades of various kinds, cooking pots, and other vessels — and stored food, all of which indicate that substantial elements of food preparation took place indoors. Food consumption is also widely attested inside houses, especially in "middle rooms," which contained benches and wall paintings and were provisioned with serving vessels that often occurred in multiples, stacked and ready for use. These rooms were positioned such that access and visibility from the outside were carefully controlled — implying a distinct host–guest relationship as well as a restricted group participating in daily commensality, probably primarily house residents. Their small size, relative to the central hall at Madhhur, is an argument for a smaller-size commensal group. Storage — of food, vessels, craft- and food-production equipment, and other items — was confined to small back rooms in some of the houses, the doors of which were sealed with clay sealings onto which stamp seals had been impressed.[8]

Two other Bakun-period sites, Tall-i Nokhodi (Late Bakun) and Rahmatabad (Middle Bakun), both located in the Sivand River Valley approximately 50 km north of Tall-i Bakun, exhibit a somewhat different pattern with regard to food preparation. At both Nokhodi and Rahmatabad, hearths and ovens were commonly present inside houses, suggesting an even greater emphasis on cooking and related food preparation indoors (Goff 1963, 1964; Bernbeck, Fazeli, and Pollock 2006).

The pottery assemblage from Tall-i Bakun exhibits a general similarity to that from Tell Abada in terms of the proportions of vessels in each functional category (fig. 7.6). The principal difference between the two is the greater emphasis at Bakun on drinking vessels. Eating/serving vessels at Bakun exhibit a narrower array of sizes than those

[8] In an analysis of the sealings from Tall-i Bakun, Alizadeh (1994) has shown that most of them are from doors, with only a minority from mobile containers, such as bales, baskets, or jars.

oi.uchicago.edu

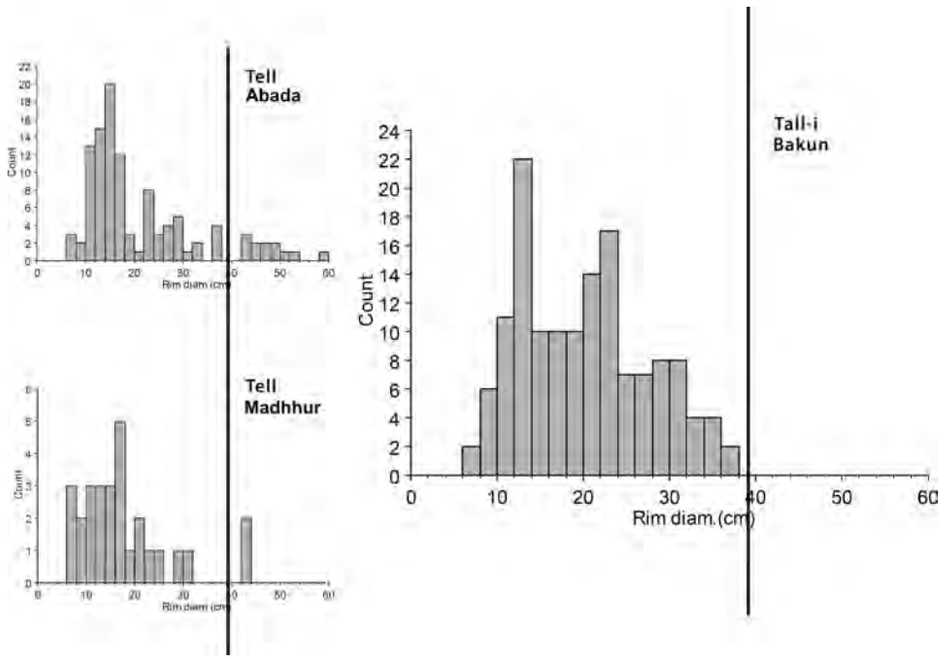


Figure 7.10. Rim diameters of eating/serving vessels at Tall-i Bakun as compared to Tells Abada and Madhhur

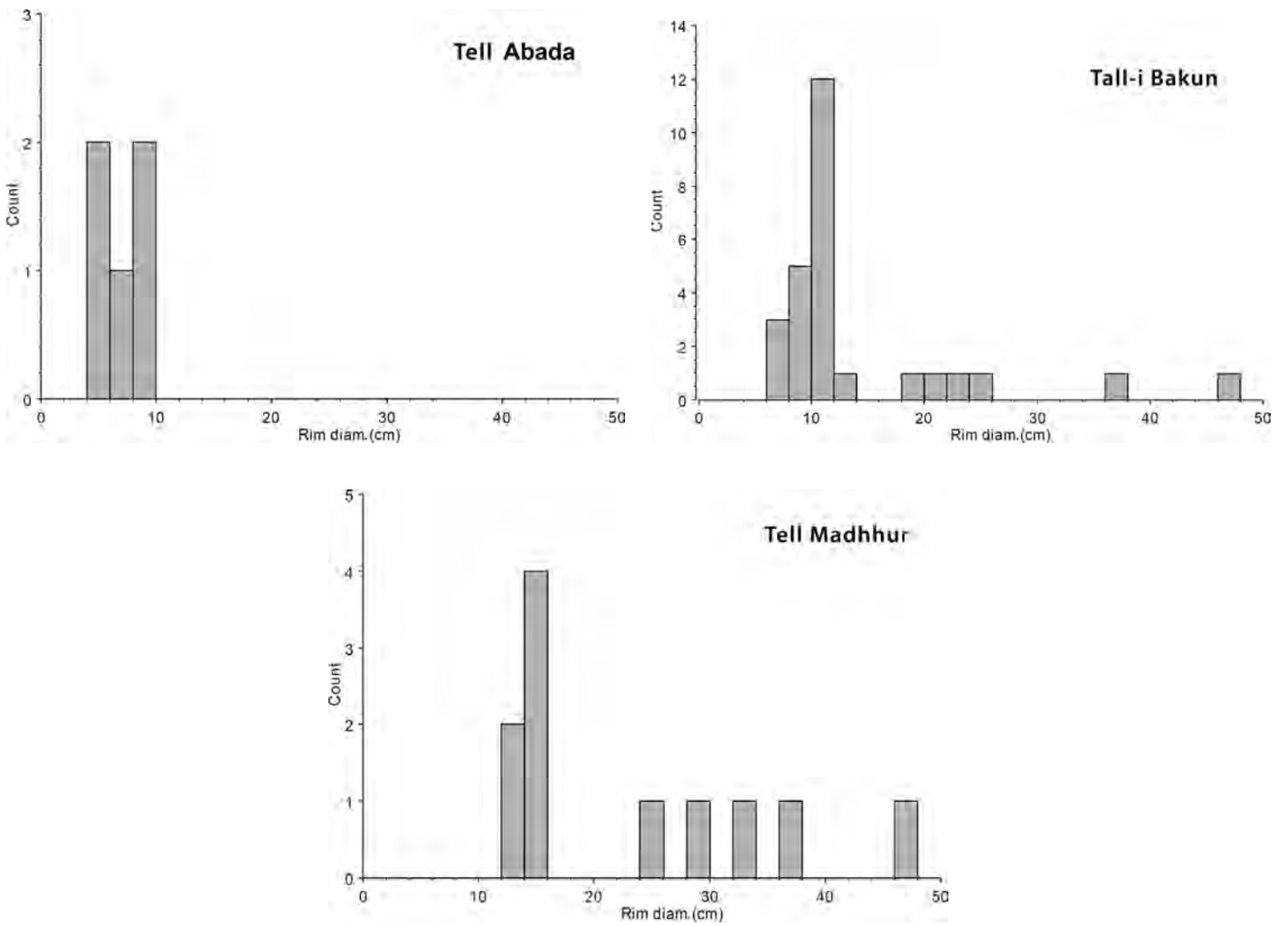


Figure 7.11. Rim diameters of food-preparation vessels at Tell Abada, Tall-i Bakun, and Tell Madhhur

oi.uchicago.edu

at either Abada or Madhhur, lacking the largest of the vessel categories present at the other two sites (fig. 7.10). Groups of people who ate together at Bakun may have been more restricted in size, a suggestion that fits with the smaller sizes of the rooms where people partook of meals. There may also have been a greater emphasis on individualized servings instead of communal consumption out of larger vessels. Similar conclusions can be drawn from the sizes of food-preparation vessels, with Bakun examples exhibiting a range of sizes much like that at Madhhur but tending more heavily toward the smaller examples (fig. 7.11).

CONCLUSIONS

The comparisons between Tells Abada and Madhhur and between those two sites and Tall-i Bakun are in some respects predictable, in others surprising. Despite the close geographical proximity of Madhhur and Abada and their formally similar architecture and artifacts, the proportions of general vessel categories, sizes of cooking- and food-preparation vessels, and locations of some grinding and cooking activities testify to marked differences in some daily practices. It appears that commensal groups may have been smaller at Abada, and social contexts in which food consumption and preparation took place in the two villages differed to some degree.

The Hamrin and Bakun comparison reveals an array of similarities in food-related practices: preparation and consumption of food generally took place inside houses, and ceramic vessels seem to have been used for more-or-less similar kinds of food-related tasks, as indicated by parallels in shapes and, to a lesser extent, in proportions of shape categories. However, differences predominate when one examines the groups engaged in food-related activities: greater emphasis was placed on individual or small-group food preparation and consumption at Bakun. Marked distinctions in architecture also point to differences in the size and composition of residential groups.

Given the formal differences and large geographic distance between the Hamrin and Bakun regions, it is hardly surprising to find differences in daily practices. Perhaps more astonishing is the extent to which they share broadly similar traditions of preparing and serving food, along with similar technological features and generalized types of sociopolitical organization. To simply attribute these to common origins or continued contacts is to some extent beside the point. We still need to ask how particular kinds of practices and structural constraints are reproduced, modified, or in some cases profoundly altered through both discursive and practical action. These are questions that go well beyond the scope of this paper but are, I contend, the kinds of inquiries that must be pursued if we are to go beyond increasingly sterile debates about the meanings of archaeological entities.

Just as surprising as the similarities between geographically distant sites are the differences between nearby ones. Despite a high degree of formal and organizational similarity between Abada and Madhhur, marked distinctions existed at the level of the practical actions and social interactions that formed the basis of daily life. These practical actions are not simply the curious minutiae of everyday life that can be dismissed as unimportant. Rather, since practices are integral to the ways in which people construct their worlds and in turn are constrained by them, it is in the sphere of daily practices that crucial elements constitutive of historical change are located.

The terminology we use — in this case, the appellation "Ubaid" — has, I would argue, a utility in designating an array of communities that cross-cut time and space and that share certain overarching formal elements and traditions. At the same time, however, "Ubaid" is a helpful designation as long as we use it as a starting point from which to ask questions about differences as well as similarities within and between those communities. Without that we risk reifying our own terms, turning them into straitjackets that preclude interesting research questions rather than promoting them.[9]

[9] I would like to thank the organizers of the Ubaid conference in Durham and the participants for lively discussions and helpful comments. Reinhard Bernbeck read a previous version of the paper and offered useful critique and suggestions.

oi.uchicago.edu

BIBLIOGRAPHY

Agamben, Giorgio

1999 *Remnants of Auschwitz: The Witness and the Archive*. New York: Zone Books.

Akkermans, Peter M. M. G., and Glenn M. Schwartz

2003 *The Archaeology of Syria: From Complex Hunter-gatherers to Early Urban Societies (ca. 16,000–300 B.C.)*. Cambridge: Cambridge University Press.

Alizadeh, Abbas

1988 "Socio-economic Complexity in Southwestern Iran during the Fifth and Fourth Millennia B.C.: The Evidence from Tall-i Bakun A." *Iran* 26: 17–34.

1994 "Social and Economic Complexity and Administrative Technology in a Late Prehistoric Context." In *Archives before Writing* (Proceedings of the International Colloquium, Oriolo Romano, October 23–25, 1991), edited by P. Ferioli, E. Fiandra, G. Giacomo Fissore, and M. Frangipane, pp. 35–58. Pubblicazioni del Centro internazionale di ricerche archeologiche antropologiche e storiche 1. Rome: Scriptorium.

2006 *The Origins of State Organizations in Prehistoric Highland Fars, Southern Iran: Excavations at Tall-e Bakun*. Oriental Institute Publications 128. Chicago: The Oriental Institute.

Appadurai, Arjun

1981 "Gastro-politics in Hindu South Asia." *American Ethnologist* 8: 494–511.

Appadurai, Arjun, editor

1986 *The Social Life of Things: Commodities in Cultural Perspective*. Cambridge: Cambridge University Press.

Atalay, Sonya, and Christine Hastorf

2006 "Food, Meals, and Daily Activities: Food Habitus at Neolithic Çatalhöyük." *American Antiquity* 71: 283–319.

Bernbeck, Reinhard

1994 *Die Auflösung der häuslichen Produktionsweise: Das Beispiel Mesopotamiens*. Berliner Beiträge zum Vorderen Orient 14. Berlin: Dietrich Reimer.

1995 "Dörfliche Kulturen des keramischen Neolithikums in Nord- und Mittelmesopotamien: Vielfalt der Kooperationsformen." In *Zwischen Euphrat und Indus: Aktuelle Forschungsprobleme in der vorderasiatischen Archäologie*, edited by K. Bartl, R. Bernbeck, and M. Heinz, pp. 28–43. Hildesheim: Georg Olms.

1997 *Theorien in der Archäologie*. Tübingen: A. Francke.

Bernbeck, Reinhard; Sarah Costello; and Necdet Ünal

2004 "Excavations at Yenice Yanı 2002." *Kazı Sonuçları Toplantısı*, Volume 25, Part 1, pp. 117–26. Ankara: T. C. Kültür ve Turizm Bakanlığı.

Bernbeck, Reinhard; Hassan Fazeli; and Susan Pollock

2006 "Life in a Fifth Millennium Village: Excavations at Rahmatabad, 2005." *Near Eastern Archaeology* 68: 94–105.

Bourdieu, Pierre

1984 *Distinction: A Social Critique on the Judgement of Taste*. Translated by Richard Nice. Cambridge: Harvard University Press.

1990 *The Logic of Practice*. Translated by Richard Nice. Stanford: Stanford University Press.

Bowser, Brenda, and J. Patton

2004 "Domestic Spaces as Public Places: An Ethnoarchaeological Case Study of Houses, Gender, and Politics in the Ecuadorian Amazon." *Journal of Archaeological Method and Theory* 11: 157–81.

Bray, Tamara, editor

2003 *The Archaeology and Politics of Food and Feasting in Early States and Empires*. New York: Kluwer Academic.

oi.uchicago.edu

Breniquet, Catherine

1989 "Les origines de la culture d'Obeid en Mésopotamie du nord." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 325–38. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Brumfiel, Elizabeth

1991 "Weaving and Cooking: Women's Production in Aztec Mexico." In *Engendering Archaeology: Women and Prehistory*, edited by J. Gero and M. Conkey, pp. 224–51. Oxford: Blackwell.

Castro Gessner, Gabriela

2008 The Technology of Learning: Painting Practices of Early Mesopotamian Communities of the 6th Millennium B.C. Ph.D. dissertation, State University of New York at Binghamton. Ann Arbor: UMI/ProQuest.

Childe, V. Gordon

1933 "Is Prehistory Practical?" *Antiquity* 7: 410–18.

de Certeau, Michel

1984 *The Practice of Everyday Life*. Translated by Steven Rendall. Berkeley: University of California Press.

Dietler, Michael, and Brian Hayden, editors

2001 *Feasts: Archaeological and Ethnographic Perspectives on Food, Politics, and Power*. Smithsonian Series in Archaeological Inquiry. Washington, D.C.: Smithsonian Institution Press.

Dollfus, Geneviève

1975 "Les fouilles à Djaffarabad de 1972 à 1974." *Cahiers de la Délégation archéologique française en Iran* 5: 11–62.

1983a "Tépé Bendebal, travaux 1977, 1978." *Cahiers de la Délégation archéologique française en Iran* 13: 133–275.

1983b "Tépé Djowi: Contrôle stratigraphique, 1975." *Cahiers de la Délégation archéologique française en Iran* 13: 17–131.

Emberling, Geoff

1997 "Ethnicity in Complex Societies: Archaeological Perspectives." *Journal of Archaeological Research* 5: 295–344.

Forest, Jean-Daniel

1987 "L'architecture obeidienne et le problème de l'étage." In *Préhistoire de la Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du djebel Hamrin* (Colloque international du Centre National de la Recherche Scientifique, Paris 17–19 décembre 1984), edited by J.-L. Huot, pp. 437–45. Paris: Éditions du Centre National de la Recherche Scientifique.

Frangipane, Marcella

2001 "Centralization Processes in Greater Mesopotamia: Uruk 'Expansion' as the Climax of Systemic Interactions among Areas of the Greater Mesopotamian Region." In *Uruk Mesopotamia and Its Neighbors: Cross-cultural Interactions in the Era of State Formation*, edited by M. S. Rothman, pp. 307–47. Santa Fe: School of American Research Press.

Giddens, Anthony

1984 *The Constitution of Society: Outline of the Theory of Structuration*. Berkeley: University of California Press.

Goff, Claire L.

1963 "Excavations at Tall-i-Nokhodi." *Iran* 1: 43–70.

1964 "Excavations at Tall-i-Nokhodi, 1962." *Iran* 2: 41–52.

Gosselain, Olivier P.

1998 "Social and Technological Identity in a Clay Crystal Ball." In *The Archaeology of Social Boundaries*, edited by M. Stark, pp. 78–106. Washington, D.C.: Smithsonian Institution Press.

oi.uchicago.edu

Habermas, Jürgen
1984 *The Theory of Communicative Action*. 2 volumes. Translated by Thomas McCarthy. Boston: Beacon Press.

Helwing, Barbara
2003 "Feasts as a Social Dynamic in Prehistoric Western Asia: Three Case Studies from Syria and Anatolia." *Paléorient* 29: 63–86.

Henrickson, Elizabeth F.
1989 "Ceramic Evidence for Cultural Interaction Between the 'Ubaid Tradition and the Central Zagros Highlands, Western Iran." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 369–403. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Henrickson, Elizabeth F., and Mary McDonald
1983 "Ceramic Form and Function: An Ethnographic Search and an Archaeological Application." *American Anthropologist* 85: 630–43.

Henrickson, Elizabeth F., and Ingolf Thuesen, editors
1989 *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988). Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Hodder, Ian A., and Craig Cessford
2004 "Daily Practice and Social Memory at Çatalhöyük." *American Antiquity* 69: 17–40.

Jasim, Sabah A.
1985 *The 'Ubaid Period in Iraq: Recent Excavations in the Hamrin Region.* British Archaeological Reports, International Series 267. Oxford: British Archaeological Reports.
1989 "Structure and Function in an 'Ubaid Village." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 79–90. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Kamp, Kathryn, and Norman Yoffee
1980 "Ethnicity in Ancient Western Asia during the Early Second Millennium B.C.: Archaeological Assessments and Ethnoarchaeological Prospectives." *Bulletin of the American Schools of Oriental Research* 237: 85–104.

Kossinna, Gustaf
1911 *Die Herkunft der Germanen: Zur Methode der Siedlungsarchäologie*. Leipzig: Kabitzsch.

Kramer, Carol
1977 "Pots and Peoples." In *Mountains and Lowlands: Essays in the Archaeology of Greater Mesopotamia*, edited by L. Levine and T. C. Young, pp. 91–112. Bibliotheca Mesopotamica 7. Malibu: Undena.

Langsdorff, Alexander, and Donald E. McCown
1942 *Tall-i-Bakun A: Season of 1932*. Oriental Institute Publications 59. Chicago: University of Chicago Press.

Margueron, Jean-Claude
1987 "Notes complémentaires sur la question de l'étage." In *Préhistoire de la Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du djebel Hamrin* (Colloque international du Centre National de la Recherche Scientifique, Paris 17–19 décembre 1984), edited by J.-L. Huot, pp. 447–58. Paris: Éditions du Centre National de la Recherche Scientifique.

Mauss, Marcel
1979 [1935] "Body Techniques." In *Sociology and Psychology: Essays of Marcel Mauss*. Translated by Ben Brewster, pp. 97–123. London: Routledge and Kegan Paul.

Meskell, Lynn
2004 *Object Worlds in Ancient Egypt: Material Biographies Past and Present*. New York: Berg.

oi.uchicago.edu

Metcalfe, Duncan, and Kathleen Heath

1990 "Microrefuse and Site Structure: The Hearths and Floors of the Heartbreak Hotel." *American Antiquity* 55: 781–796.

Miller, Daniel, editor

2005 *Materiality*. Durham: Duke University Press.

Molleson, Theya

2000 "The People of Abu Hureyra." In *Village on the Euphrates: From Foraging to Farming at Abu Hureyra*, edited by A. Moore, G. Hillman, and A. Legge, pp. 301–24. Oxford: Oxford University Press.

Munn, Nancy D.

1986 *The Fame of Gawa: A Symbolic Study of Value Transformation in a Massim (Papua New Guinea) Society*. The Lewis Henry Morgan Lectures 1976. Cambridge: Cambridge University Press.

Myers, Fred R., editor

2001 *The Empire of Things: Regimes of Value and Material Culture*. Santa Fe: School of American Research Press.

Nissen, Hans J.

1988 *The Early History of the Ancient Near East, 9000–2000 B.C.* Translated by Elizabeth Lutzeier, with Kenneth Northcott. Chicago: University of Chicago Press.

1989 "The 'Ubaid Period in the Context of the Early History of the Ancient Near East." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 245–55. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

2001 "Cultural and Political Networks in the Ancient Near East during the Fourth and Third Millennia B.C." In *Uruk Mesopotamia and Its Neighbors: Cross-cultural Interactions in the Era of State Formation*, edited by M. S. Rothman, pp. 149–79. Santa Fe: School of American Research Press.

Pauketat, Timothy

2001 "A New Tradition in Archaeology." In *The Archaeology of Traditions: Agency and History Before and After Columbus*, edited by T. Pauketat, pp. 1–16. Gainesville: University Press of Florida.

Pollock, Susan

1983 "Style and Information: An Analysis of Susiana Ceramics." *Journal of Anthropological Archaeology* 2: 354–90.

1999 "Sieving for Sumerians?" In *Fluchtpunkt Uruk: Archäologische Einheit aus methodischer Vielfalt; Schriften für Hans J. Nissen*, edited by H. Kühne, R. Bernbeck, and K. Bartl, pp. 132–42. Rahden: Marie Leidorf.

Pollock, Susan, and Reinhard Bernbeck

2010 "Neolithic Worlds at Tol-e Baši." In *The 2003 Excavations at Tol-e Baši, Iran: Social Life in a Neolithic Village*, edited by S. Pollock, R. Bernbeck, and K. Abdi, pp. 274–87. Deutsches Archäologisches Institut, Eurasien Abteilung. Archäologie in Iran und Turan. Mainz: Philipp von Zabern.

Rainville, Lynn

2005 *Investigating Upper Mesopotamian Households Using Micro-archaeological Techniques*. British Archaeological Reports, International Series 1368. Oxford: Archaeopress.

Roaf, Michael

1989 "Ubaid Social Organization and Social Activities as Seen from Tell Madhhur." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 91–146. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

1990 *Cultural Atlas of Mesopotamia and the Ancient Near East*. New York: Facts on File.

Roaf, Michael, editor

1984 "Tell Madhhur: A Summary Report on Excavations." *Sumer* 43: 108–67.

oi.uchicago.edu

Saeedi, Sepideh

2006 The Technique of Microdebris Analysis: Case Studies from Toll-e Bashi and Tappeh Rahmatabad. M.A. thesis, Tehran University. [In Persian]

2010 "Microdebris Analysis." In *The 2003 Excavations at Tol-e Baši, Iran: Social Life in a Neolithic Village*, edited by S. Pollock, R. Bernbeck, and K. Abdi, pp. 246–55. Deutsches Archäologisches Institut, Eurasien Abteilung. Archäologie in Iran und Turan. Mainz: Philipp von Zabern

Schatzki, Theodore

2001 "Introduction: Practice Theory." In *The Practice Turn in Contemporary Theory*, edited by T. Schatzki, K. Knorr Cetina, and E. von Savigny, pp. 1–14. London: Routledge.

Sinopoli, Carla M.

1991 *Approaches to Archaeological Ceramics*. New York: Plenum.

Smith, Michael

1985 "Toward an Economic Interpretation of Ceramics: Relating Vessel Size and Shape to Use." In *Decoding Prehistoric Ceramics*, edited by B. Nelson, pp. 254–309. Carbondale: Southern Illinois University Press.

Stahl, Ann

1993 "Concepts of Time and Approaches to Analogical Reasoning in Historical Perspective." *American Antiquity* 58: 235–60.

Stein, Gil J.

1994 "Economy, Ritual and Power in 'Ubaid Mesopotamia." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 35–46. Monographs in World Archaeology 18. Madison: Prehistory Press.

Thuesen, Ingolf

1989 "Diffusion of 'Ubaid Pottery into Western Syria." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 418–37. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Trigger, Bruce

2006 *A History of Archaeological Thought*. 2nd edition. Cambridge: Cambridge University Press.

van Dülmen, Richard

2000 *Historische Anthropologie: Entwicklung, Probleme, Aufgaben*. Cologne: Böhlau.

Wright, Henry T.

1994 "Prestate Political Formations." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 67–84. Monographs in World Archaeology 18. Madison: Prehistory Press.

Wright, Henry T., editor

1981 *An Early Town on the Deh Luran Plain: Excavations at Tepe Farukhabad*. Memoirs of the Museum of Anthropology 13. Ann Arbor: University of Michigan.

Wright, Henry T.; Naomi F. Miller; and Richard Redding

1980 "Time and Process in an Uruk Rural Center." In *L'archéologie de l'Iraq du début de l'époque néolithique à 333 avant notre ère*, edited by M.-T. Barrelet, pp. 265–84. Paris: Centre National de la Recherche Scientifique.

Wylie, Alison

1985 "The Reaction Against Analogy." *Advances in Archaeological Method and Theory* 8, edited by M. Schiffer, pp. 63–111. New York: Academic.

oi.uchicago.edu

8

FIGURING OUT IDENTITY: THE BODY AND IDENTITY IN THE UBAID

KARINA CROUCHER, *University of Manchester*

INTRODUCTION

The way we treat our bodies is traditionally understood to communicate various messages about our identity to those around us. This may include messages about our role in society, including our careers, marital status, ethnic identity, age, and group belonging (see, e.g., Davis 1992; Roach-Higgins and Eicher 1992; Hendrickson 1996). In addition, the way our bodies are treated may serve to construct as well as reflect these identities, influencing our understanding and experiences of the world around us. So how does this affect our understandings of archaeological material? While our modern experiences are undoubtedly far removed from the inhabitants of the sites we are studying, I believe we can still gain an insight into the meaning of bodily treatment during the Ubaid period. I hope in this paper to offer alternative insights into treatment of the body in Ubaid contexts, where it appears that perceptions of the body are changing during this period of time. We see an apparent greater emphasis on the individual body in mortuary contexts compared with earlier periods. Mortuary material, as well as figurine evidence, can add further insights into perceptions of the body, as can items of personal adornment, including labrets. Using material from figurines and mortuary contexts, including examples of bodily decoration and cranial modification, and drawing on ethnographic material, this paper examines the role the body played in identity construction and expression during the Ubaid period. While this paper is not intended to offer conclusive, universal statements about the Ubaid, it does, I hope, form a foundation for future research into the body during the prehistory of Mesopotamia.

FIGURINES

Figurines are arguably among the most published of artifact groups in the Near East (see Belcher in prep.; Croucher 2008; Daems 2004, 2005, 2008; McAdam 2003; Meskell et al. 2008 for recent and ongoing research into Near Eastern figurines). Interpretations of anthropomorphic representations traditionally focus around typological considerations, such as Ucko's (1968, 1996) and Voigt's (2000) categorization of figurines as cult items, vehicles of magic, initiation aids, or toys, focusing on the perceived function of these types of figurines. Additionally, there are well-known arguments for fertility and mother-goddess cults (Gimbutas 1982, 1991; see also Meskell 1995).

It is often the case that scholarly interpretations of figurines say little about treatment and perceptions of the lived body. Figurines can potentially provide us with insights into concepts of personhood, gender, and aspects of power over and treatment of the body, including its decoration and manipulation, communicating messages about identities and societies. While figurines vary in their likeness to "real" human bodies, many are none-the-less culturally significant representations, whether realistic or more amorphous in nature. While these may or may not necessarily be accurate personal portrayals, many are realistic and meaningful bodily forms. It seems reasonable to expect that treatment of these figurines could accurately reflect treatment and form of the human body — whether real, idealized, or stylistic. It is consequently worth exploring these concepts in our interpretations of figurine evidence. While it may be true that no definitive answer can be gained, this study can at least bring us a little closer to real, lived experiences and perceptions of the body.

Ethnographic material demonstrates numerous examples of the replication of bodily treatment processes through figurines and other representations, including carvings and pottery vessels. A fuller analysis of such material can

oi.uchicago.edu

be found in Croucher 2005 (chapter 2), where examples are discussed from a range of geographical and temporal contexts. Examples include the Tabwa of southeastern Zaire, where identical markings placed on figurines and the human body follow the death of a twin (Roberts 1988: 55), as well as markings placed on children's toys reflecting those placed on the body (Roberts 1988: 51). There have also been recoveries of actual skin from the archaeological record, such as a find dating to around 2000 B.C. from the Nubian village of Kubban, where a decorated figurine was recovered from alongside a mummy displaying the same patterning in punctured skin (Hambly 1925: 63, 321).

The Maori, famous for their tattooed faces, or *mokos*, use the facial tattoo as an identity marker. The tattoo signifies strength and bravery, and it also reveals certain information about the wearer's biography (Robley 1896: 68; Rubin 1988; Schiffmacher 1996: 101). In early land agreements with Europeans, the *moko* would be drawn in place of a signature (Robley 1896: 11). The Maori would also apply the *moko* to carved wooden figures marking the houses of chiefs. Not only is the final effect comparable, but there is also an imitation of the method used in the scarification process, whereby the human face is literally carved to produce the dramatic tattooed effect (Hambly 1925: 261).

There are numerous further examples, from both anthropological and archaeological sources, where the motifs and decoration applied to the human body are represented in figurines. The images are produced for a variety of reasons, whether imitations of idols, actual representations, artistic forms, commemorations of particular individuals, images with protective properties, or even simply children's toys (e.g., Roberts 1988; Voigt 2000; Ucko 1996; Joyce 2008). This variety of reasons is an adequate demonstration of one of the flaws of direct anthropological analogy. However, these do demonstrate the possibilities of actual bodily practice being repeated through anthropomorphic representations. What is apparent is that in most cases these are not zoomorphic or fantastical representations; the images are realistic representations of the human body.

While I would generally argue against universal statements of human behavior, there are recurring themes that occur repeatedly with the processes of body modification. Concepts of making the body complete, or viewing the body as a "project," predominate in both contemporary and past ethnographic literature, along with concepts of aesthetics and beauty. Turner describes how, through decoration, tattooing and scarification, the body in many premodern societies is "an important and ubiquitous target for public symbolism" used as a communal tool, displaying commitment and communal identity (Turner 1991: 5; see also Berns 1988). Marks of tattooing and scarification often "symbolize the fact that an individual has become a member of the social group, the cultural collective, the 'social body'" (Polhemus 1978: 151).

Works by Shilling (1994) and Giddens (1991) discuss the importance of the physical "self" and how in modernity the conceptualization of the body can often be understood as an ongoing, or unfinished, project. The body has become "constitutive of the self" (Giddens 1991: 52), a self that requires constant redefining and asserting in order to progress and be transformed through life, with identities constructed and recognized through constant performance. Transformation of the physical body is one medium through which the body can be manipulated and worked upon, as a platform for performance and non-verbal communication.

We see repeatedly through ethnographic examples that bodily treatment is perceived as increasing the aesthetic quality and attractiveness of the wearer. For example, to the Tiv of Nigeria, scarification is part of an important system of beautifying the body, which includes tooth chipping, oiling, and the use of henna on nails and hands, as well as dress. Both men and women are scarred. Part of the beauty is said by the Tiv to come from the pain involved during scarification, a display of the unselfishness involved in acquiring the body decoration for the aesthetic pleasure of others (Bohannan 1988: 82). The Bushmen of the Kalahari adorn themselves with beadwork in order to appear attractive to the spirits/deities (Lewis-Williams and Dowson 1989). The Kau of southeast Nuba have also been described as a culture heavily influenced by aesthetics in their bodily decoration (Riefenstahl 1976: 219–21). Body decoration among the Nuba, including scarification on women and painting on men, is discussed by Faris (1988), who investigates the ideology behind such beautification, which on the surface appears to be purely aesthetic. He perceives that in reality it is functional as part of a more complex system of power relations. Age and gender distinctions are reinforced through bodily decoration, including a prescribed use of certain colors (Faris 1988: 31). Social relations here are constructed and reinforced through the performance of body decoration. While it is difficult to project these motivations into the past, they should at least be considered feasible aspects of bodily treatment.

When Ubaid figurines are examined, it is clear that many examples are decorated. There is understandably debate concerning the exact nature of such decoration on archaeological examples, whether they demonstrate tattooing, scarification, painting, adornments, or clothing. Although one interpretation is not possible for the whole figurine category, it does seem that, while some are representative of clothing, other examples are more ambigu-

oi.uchicago.edu

ous. In some cases the motif does appear to be applied directly to the skin, as can be seen in figure 8.1, from Ur in southern Mesopotamia. Woolley (1955: 12) describes the figurines as nude, with "never any hint of dress" other than belts, bangles, and necklaces. There are spots of black paint or small lumps of allied clay on certain figurines recovered from the Ubaid levels at Ur, described by Woolley (1955: 12) to "undoubtedly represent tattoo marks, the tattooing being done either in colour, as by the modern Arab of Syria and Iraq, or by cicatrices as by tribes in Arabia and Egypt," and marks on the lower body are described as either representing clothing or showing "tattooing of the body" (Hall and Woolley 1927: 153; see also McAdam 2003: 163, for a summary of evidence of decoration on Ubaid figurines).

People were likely to have been decorating their bodies using a range of media during the Ubaid period; tattooing, scarification, painting, ornamentation. While it is difficult to distinguish whether individual bodily markings relate to scarification, tattooing, or body painting, we can reasonably assume that in most cases such decoration is indicative of the design being directly applied to the skin, whether through the temporary means of painting, or more permanent forms of tattooing and scarification. Given that we have no way of detecting the permanent or temporary nature of bodily decoration, I would argue that we should not be too concerned with this distinction: what is important is that decoration was being applied. As Henry Field noted from anthropological studies in Iraq in the 1950s, kohl and henna distribution coincided with tattooing (1958: 4). It was seemingly the importance of the decoration, rather than the media used, that was significant. While we cannot know the method used, we can see the importance of the overall effect, and that they were marking their bodies in a significant way.

There are a wide range of potential motivations behind decoration of the body and its portrayal through representations, and aesthetics may have been one such motivation. This may have been closely linked with concepts of idols, which themselves often portray achievable, natural forms of human beings. This is a theme discussed by Irene Winter (1996: 11) in relation to the Victory Stela of Naram-Sin of Agade, dating to the mid-third millennium B.C. She discusses the aesthetics of the image of Naram-Sin, who appears "well proportioned, lithe, fit, and simply 'divine'!" The image of Naram-Sin is, she argues, inextricably intertwined with concepts of sexuality, vigor, vitality, and masculinity. The imagery demonstrates how these concepts were being expressed visually through the monument. A further related theme is that of the body image: there is clearly a change in general figurine representations during the Ubaid period from the earlier, fuller-figured examples seen throughout the region. Perhaps different stag-

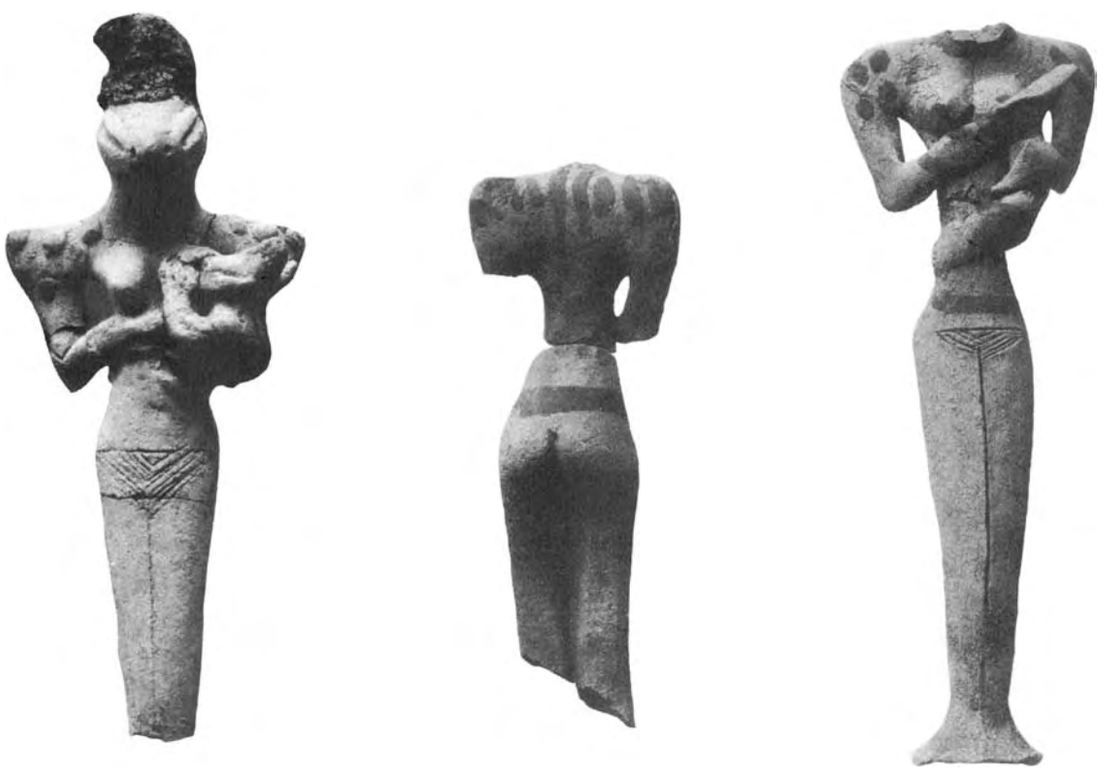


Figure 8.1. Ubaid-period figurines from Ur (after Woolley 1955: pl. 20)

oi.uchicago.edu

es of maturity were becoming important for representation, a theme discussed more fully by Daems (this volume; 2006).

The role of pain in rites of passage is common in ethnographic examples (i.e., Berns 1988: 63; Roberts 1988: 45), as is the use of body marking and decoration to communicate life-stages, especially when entering adulthood (Daems, this volume), the body conveying messages about status and identity. Although the exact meanings and messages being communicated may be lost to us, that bodies were used as performative, communicative tools is evident, portraying identities and inscribing the body with meaning.

A further example of the portrayal of identity through figurines is with relation to cranial modification. Work by Molleson and Campbell (1995) originally identified the exaggerated head shape displayed in Ubaid figurines as the potential result of cranial modification. Further research has involved the investigation of Iranian examples, examining the role figurines can play in supporting this interpretation (Daems and Croucher 2007). We are fortunate with cranial modification in that, unlike skin, skeletal evidence often survives to attest to the practice. Examples exist from Choga Sefid, where "extreme cranial deformation" is evidenced on at least six unsexed skulls (Hole 1977: 344–45, pl. 28, 30–31; Daems and Croucher 2007: 6). At the site of Ali Kosh, three (all female) of the fourteen inhumations displayed evidence of cranial modification, with possibly further skulls also modified, although too badly preserved for confirmation (Hole, Flannery, and Neely 1969: 42, 248; Daems and Croucher 2007: 6). Two further skulls were also recovered from the site of Choga Mish, one of which, probably female, had been artificially modified (Ortner 1996: 319–20; Daems and Croucher 2007: 7). Further evidence has been documented from the sites of Seyh Hoyuk (Şenyürek and Tunakan 1951), Tell Madhhur, and Telul-eth Thalathat (Molleson and Campbell 1995: 50; Daems and Croucher 2007: 5), while Lorentz (this volume) documents further accounts from the sites of Qumrud (Egami 1958) and Degirmentepe (Özbek 2001), and potential evidence at Eridu and Seh Gabi (Hole 1987; Meiklejohn et al. 1992). Examples of cranial modification from earlier periods throughout the region are already well documented (see, e.g., Trinkaus 1982; Meiklejohn et al. 1992: 84; Arensburg and Hershkovitz 1988, 1989; Kiszely 1978: 7; Özbek 1974; Daems and Croucher 2007: 3–7).

Figurines can aid our interpretations here: exaggerated head shape can be seen on many Ubaid figurines, including examples from Eridu and Ur, and also on pottery fragments and seals. I have argued elsewhere (Croucher 2004, 2006, 2008; Daems and Croucher 2007) that the social implications of the practice should be considered. Shaping the head in this manner would have been a highly visual indicator, difficult in many cases to hide, communicating messages about the wearer. Such a head shape would have held real implications in terms of identity construction, causing the wearer to stand out as either belonging to, or excluded from, certain social groups. This would surely create either a sense of otherness, or of belonging, and play a significant role in the construction of social identities and experiences of being in the world. In addition, the practice reveals information about power over the body — significantly, not by the wearer, but by the parent or adult during the time of infancy. Clearly the wearer had no personal choice in the practice, nor any means of diverting or changing the process throughout his or her lifetime, however, hairstyle and ornaments could be used to accentuate or imitate head shape (Croucher 2004, 2005, 2008; Croucher and Daems 2007).

MORTUARY PRACTICE

Figurine evidence can thus reveal information about appearance and identity. Additional information can be gained through the study of mortuary practices. Current published material suggests that burial practices during the Ubaid predominantly consisted of primary inhumations, often with personal adornment, and in some cases with red ochre added. While I would argue that a uniform interpretation of all burial material is problematic — each individual case should be examined on its own merits — the evidence does suggest that greater importance was generally being placed on the integrity of the individual body. This is in contrast to earlier periods where a greater number of secondary burials can be seen, especially during the Halaf of northern Mesopotamia (see, e.g., Domuztepe, Arpachiyah, and Yarim Tepe II [Campbell 1992; Campbell, Carter, and Healey 1999; Carter, Campbell, and Gauld 2003; Merpert and Munchaev 1993b; Mallowan and Rose 1935; Hijjara 1997: 77]).

Remains from the Ubaid period include sites such as Tell Abada, where 127 primary burials of infants within urns were recovered (Jasim 1985; Hole 1989). At Jaffarabad, on the Susiana Plain, we see the remains of a child covered in red ochre, as well as the interment of other children and infants usually accompanied by jars and bowls

oi.uchicago.edu

(Hole 1989). From Yarim Tepe's Ubaid levels were recovered six primary interments, four of which were juvenile (Merpert and Munchaev 1993a). From Eridu, 193 burials have been recovered (Vertesalji 1989; Safar, Mustafa, and Lloyd 1981). Woolley (1955: 20) describes excavations at Ur as revealing primary inhumations for the Ubaid period, although badly preserved. A polished bone pin was retrieved with one burial, with another having a string of small shell and steatite ring beads, and there were further examples of bodies with fine red powder, and one with a lump of red hematite placed by the head.

Not only do we see the use of primary inhumations as the principle, archaeologically recognizable, disposal of the deceased, but we additionally see the increased use of cemeteries during this period, such as at Eridu, Ur, and Susa in the south (Pollock 1999: 198–99), and at Mashnaqa, Arpachiyah, and Tepe Gawra in the north (Hole 1989; Akkermans 1989; Akkermans and Schwartz 2003: 175). The evidence suggests a changing role played by the dead in the lives of the living. Previously, contact between the living and dead was maintained physically through secondary treatment of the deceased — through the defleshing, recovering, or circulation of bones and body parts in a variety of contexts (Croucher in press). During the Ubaid period we see the individual body retained, and the seclusion of bodies from the realms of the living. No longer are there signs of the repeated contact with the dead — conversely, they are interred in a separate location, and the physical bodies remain in a separate sphere from the living (see Thomas 2000). However, the occurrence of isolated cases of secondary burials, such as at Susa (Pollock 1999, referencing Hole 1990; Canal 1978: 33), indicates that there are exceptions, again reinforcing the merit of investigating individual sites.

That many of the burials above were recovered with adornments, especially beads, necklaces, and even headdresses, suggests the importance of these items as personal markers, of relevance to identity construction and significant enough to be intentionally placed in mortuary contexts. It also highlights the role of the body as a site for display, performance, and communication, in both living and mortuary domains.

Included in the category of adornments are labrets (lip plugs), most commonly worn through the bottom lip. While origins of the practice in ethnographic examples are unclear, they are believed to reflect beauty, as well as social status, with differing styles and materials used for different people and occasions. The Ga'anda of Nigeria, for example, wear labrets to mark changed identities during particular phases of life and for different events and ceremonies (Berns 1988). Labrets are common finds from the Ubaid period. These have most famously been recorded from the Deh Luran Plain excavations (Hole, Flannery, and Neely 1969: 254, burial 10), where a labret was found in situ against the mandible, with corresponding wear marks on teeth (fig. 8.2). Further finds of labrets and comparable objects (often categorized as cones, studs, or flanged discs) are repeatedly recovered from Ubaid sites, including Tell el-'Oueili, Hajji Muhammad, Tell al-Ubaid, Ur, Tell 'Uqair, Tell Abada, Tell Rashid, Tell Madhhur, Tepe Gawra, Zagheh, Pardis, Cheshmeh-Ali (Tvetmarken 2005), and H3 in Kuwait (Carter 2002: fig. 5).

Of course, in many cases items are recovered that appear to be labrets, but due to their contexts their use is unclear. Such a debate has emerged at the earlier site of Sabi Abyad, where large collections of items are debatably either tokens or labrets (B. Nilhamn and O. Nieuwenhuyse, pers. comm.; Croucher 2005: 209). It is feasible that such items were more than simply one thing or another — that they served as both items of adornment, as well as tokens or items of exchange. Concepts of enchainment may be relevant here, where such personal objects are viewed as inalienable — that is, they are not removed from their owner/giver (Chapman 2000; Mauss 1967; Fowler 2001, 2004). They are not given as objec-

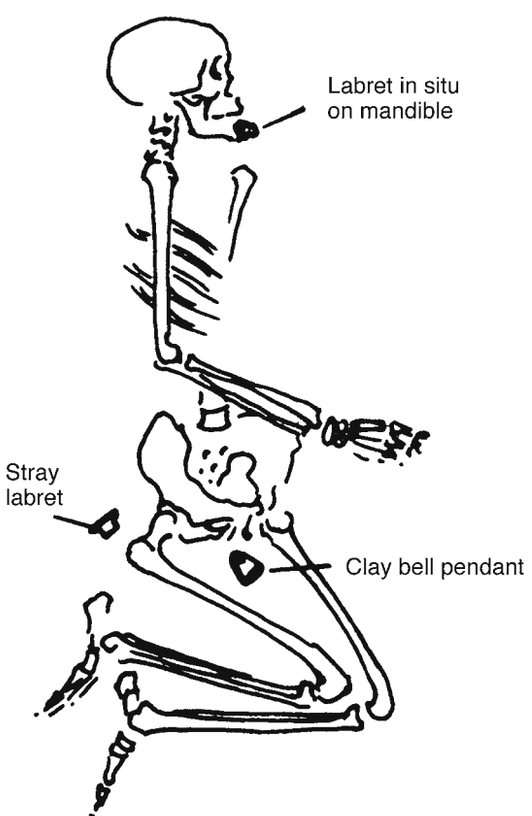


Figure 8.2. Burial with labret in situ. Deh Luran, southwest Iran (after Hole, Flannery, and Neely 1969: 254)

oi.uchicago.edu

tifiable items, but instead represent communication, indebtedness, and other relationships between the giver and receiver. Relationships are reinforced with the exchange of personal items, where it is seen that it is not simply the item that is being given, but an "essence" of the giver.

The use of personal items of adornment for exchange has also been discussed in a more modern context by Casella (2000). The excavation of a nineteenth-century Australian women convicts' prison revealed that buttons were not only used for dress and adornment, but additionally considered trade items and even gaming pieces. The trade of personal items extended into sexual activity, considered an acceptable means of trade. Although such an example is far removed from our prehistoric material, the concept that such items can have multiple (although often connected) meanings is relevant.

The exchange and circulation of personal items may relate to concepts of indebtedness and the maintenance of relationships; it is feasible then that such items are neither simply items of adornment nor items of exchange (neat categories we impose on the material for our own purposes), but are instead embedded with meaning, related to differing spheres of activity, but nonetheless embedded in concepts of identity and communication.

CONCLUSION

The way that we treat our bodies sends non-verbal messages to those around us, perhaps signifying social inclusion or exclusion, rebellion, power, belonging, or social status. Bodily treatment also serves in the active construction, as well as reflection, of identities. While our modern experiences are undoubtedly far removed from those inhabitants of the sites we are studying, we can still gain an understanding of bodily treatment during this period. Through examining evidence from figurines, small finds, and mortuary contexts, including examples of bodily decoration and cranial modification, insights have been gained into the role the body played in identity construction during the Ubaid period. Evidence of tattooing, scarification, and painting demonstrates the importance of the body as a communicative tool, perhaps signifying age, status, or social position. Cranial modification further demonstrates the importance of the body for displaying status — perhaps group belonging or individual identity. The use of cemeteries suggests that the dead were playing a much less significant physical role in the lives of the living than witnessed during earlier periods. The individual body remains integral and is adorned with ornaments and ochre, even decorated and performed through death, as well as during life. We see the use of ornamentation, including labrets, to mark the body, both in life and death, with items such as labrets potentially also used as a means of negotiating relationships and identities.

I hope that this preliminary investigation serves as a means to build and explore avenues for future research. Through this paper insights have been offered into concepts of bodily identity and the role that the body played in identity construction during the Ubaid period, with the body used as a site for display, performance, and communication.

ACKNOWLEDGMENTS

I would like to thank Frank Hole for permission to reuse the Deh Luran Plain material and for comments on cranial modification. I also thank Olivier Nieuwenhuyse and Bonnie Nilham for their discussion on Sabi Abyad labrets, Aurelie Daems and Ellen Belcher for access to their unpublished material and comments on this paper, Cecile Lelek Tvetmarken for permission to refer to unpublished material, Stuart Campbell for discussion on many components of this paper, the anonymous reviewers for their comments, and finally Rob Carter for organizing a thought-provoking and enjoyable conference on the Ubaid period.

oi.uchicago.edu

BIBLIOGRAPHY

Akkermans, Peter M. M. G.

1989 "Tradition and Social Change in Northern Mesopotamia during the Later Fifth and Fourth Millennium B.C." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 339–67. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Akkermans, Peter M. M. G., and Glenn M. Schwartz

2003 *The Archaeology of Syria: From Complex Hunter-Gatherers to Early Urban Societies (ca. 16,000–300 B.C.)*. Cambridge: Cambridge University Press.

Arensburg, B., and I. Hershkovitz

1988 "Cranial Deformation and Trephination in the Middle East." *Bulletins et Mémoires de la Société d'Anthropologie de Paris* 5: 139–50.

1989 "Artificial Skull 'Treatment' in the PPNB Period: Nahal Hemar." In *People and Culture in Change*, edited by I. Hershkovitz, pp. 115–33. Proceedings of the Second Symposium on Upper Palaeolithic, Mesolithic and Neolithic Populations of Europe and the Mediterranean Basin. British Archaeological Reports, International Series 508(i). Oxford: British Archaeological Reports.

Belcher, Ellen

In preparation Embodying the Halaf: Fifth Millennium Figurines from Northern Mesopotamia. Ph.D. dissertation, Columbia University.

Berns, Marla C.

1988 "Ga'anda Scarification: A Model for Art and Identity." In *Marks of Civilization: Artistic Transformations of the Human Body*, edited by A. Rubin, pp. 51–76. Los Angeles: Museum of Cultural History, University of California.

Bohannan, P.

1988 "Beauty and Scarification amongst the Tiv." In *Marks of Civilization: Artistic Transformations of the Human Body*, edited by A. Rubin, pp. 77–82. Los Angeles: Museum of Cultural History, University of California.

Campbell, Stuart

1992 Culture, Chronology and Change in the Later Neolithic of North Mesopotamia. Ph.D. dissertation, University of Edinburgh.

Campbell, Stuart; Elizabeth Carter; and Elizabeth Healey

1999 "Emerging Complexity on the Kahramanmaras Plain, Turkey: The Domuztepe Project, 1995–1997." *American Journal of Archaeology* 103: 395–418.

Canal, D.

1978 "Travaux à la terrasse haute de l'Acropole de Suse I: Historique, stratigraphie et structures." *Cahiers de la Délégation Archéologique Française en Iran* 9: 11–55.

Carter, Elizabeth; Stuart Campbell; and Suellen Gauld

2003 "Elusive Complexity: New Data from Late Halaf Domuztepe in South Central Turkey." *Paléorient* 29: 117–34.

Carter, Robert A.

2002. "Ubaid-period Boat Remains from As-Sabiyah: Excavations by the British Archaeological Expedition to Kuwait." *Proceedings of the Seminar for Arabian Studies* 32: 13–30.

Casella, Eleanor C.

2000 "'Doing Trade': A Sexual Economy of Nineteenth-Century Australian Female Convict Prisons." *World Archaeology* 32: 209–21.

Chapman John

2000 *Fragmentation in Archaeology: People, Places and Broken Objects in the Prehistory of South Eastern Europe*. London: Routledge.

oi.uchicago.edu

Croucher, Karina

2004 "An Insight into Treatment of the Body in the Ancient Near East." Paper Presented at the 2004 British Association for Near Eastern Archaeology Conference, held at Reading University 25–27 March 2004.

2005 Treatment of the Body in the Ancient Near East. Ph.D. dissertation, University of Manchester.

2006 "Getting Ahead: Exploring Meanings of Skulls in the Neolithic Near East." In *Skull Collection, Modification and Decoration*, edited by M. Bonogofsky, pp. 29–44. British Archaeological Reports, International Series 1539. Oxford: Archaeopress.

2008 "Ambiguous Genders, Altered Identities: Alternative Interpretations of Figurine and Mortuary Evidence from the 'PPNB'–'Halaf' Periods." In *Gender Through Time in the Ancient Near East*, edited by D. Bolger, pp. 21–52. Lanham: AltaMira.

In press "Bodies in Pieces in the Neolithic Near East." In *Body Parts and Wholes: Changing Relations and Meanings*, edited by J. Hughes, K. C. Rebay, and M. L. Stig Sørensen, pp. 6–19. Oxford: Berghahan Books.

Daems, Aurelie

2004 "On Prehistoric Human Figurines in Iran: Current Knowledge and Some Reflections." *Iranica Antiqua* 39: 1–31.

2005 Human Figurines from Neolithic to Chalcolithic Iraq and Iran: A Reassessment of Function and Use through Material, Morphology, Type, Damage and Context. Ph.D. dissertation, Ghent University.

2006 "Figurines as Family: Swapping the Ritual for the Social Role?" Relatively Speaking: An Archaeology of Relationships in the Prehistoric Near East. University of Wales, Lampeter, 3–5 November 2006.

2008 "Evaluating Patterns of Gender through Mesopotamian and Iranian Human Figurines: A Reassessment of the Neolithic and Chalcolithic Period Industries." In *Gender Through Time in the Ancient Near East*, edited by D. Bolger, pp. 77–118. Lanham: AltaMira.

Daems, Aurelie, and Karina Croucher

2007 "Artificial Cranial Modification in Prehistoric Iran: Evidence from Crania and Figurines." *Iranica Antiqua* 42: 1–21.

Davis, Fred

1992 *Fashion, Culture and Identity*. Chicago: University of Chicago Press.

Egami, Namio, editor

1958 Telul eth Thalathat 1. *The Excavation of Tell II: The First and Second Season (1956–1957)*. Tokyo University Iraq-Iran Archaeological Expedition, Report 1. Tokyo: Institute of Oriental Culture, University of Tokyo.

Faris, J.

1988 "Significance of Differences in the Male and Female Personal Art of the Southeast Nuba." In *Marks of Civilization: Artistic Transformations of the Human Body*, edited by A. Rubin, pp. 29–40. Los Angeles: Museum of Cultural History, University of California.

Field, Henry

1958 *Body-marking in Southwestern Asia*. Papers of the Peabody Museum of Archaeology and Ethnology 45, no. 1. Cambridge: Peabody Museum.

Fowler, Chris

2001 "Personhood and Social Relations in the British Neolithic, with a Study from the Isle of Man." *Journal of Material Culture* 6: 137–64.

2004 *The Archaeology of Personhood: An Anthropological Approach*. Themes in Archaeology. London and New York: Routledge.

Giddens, Anthony

1991 *Modernity and Self-identity: Self and Society in the Late Modern Age*. Stanford: Stanford University Press.

Gimbutas, Marija

1982 *The Goddesses and Gods of Old Europe*. Los Angeles: University of California Press.

1991 *The Civilization of the Goddess: The World of Old Europe*. San Francisco: Harper.

oi.uchicago.edu

Hall, Henry R., and C. Leonard Woolley
1927 *Al-'Ubaid*. Ur Excavations 1. Oxford: University Press.

Hambly, Wilfrid D.
1925 *The History of Tattooing and Its Significance*. London: H. F. & G. Witherby.

Hendrickson, Hildi
1996 *Clothing and Difference: Embodied Identities in Colonial and Post-colonial Africa*. Body, Commodity, Text. Durham: Duke University Press.

Hijjara, Ismail
1997 *The Halaf Period in Northern Mesopotamia*. Edubba 6. London: NABU.

Hole, Frank
1977 *Studies in the Archeological History of the Deh Luran Plain: The Excavation of Chagha Sefid*. Memoirs of the Museum of Anthropology 9. Ann Arbor: University of Michigan.
1987 *The Archaeology of Western Iran: Settlement and Society from Prehistory to the Islamic Conquest*. Smithsonian Series in Archaeological Inquiry. Washington, D.C.: Smithsonian Institution Press.
1989 "Patterns of Burial in the Fifth Millennium." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 149–80. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.
1990 "Cemetery or Mass Grave? Reflections on Susa I." In *Contribution à l'histoire de l'Iran: Mélanges offerts à Jean Perrot*, edited by F. Vallat, pp. 1–14. Paris: Éditions recherches sur les civilisations.

Hole, Frank; Kent V. Flannery; and James A. Neely
1969 *Prehistory and Human Ecology of the Deh Luran Plain: An Early Village Sequence from Khuzistan, Iran*. Memoirs of the Museum of Anthropology 1. Ann Arbor: University of Michigan.

Jasim, Sabah A.
1985 *The 'Ubaid Period in Iraq: Recent Excavations in the Hamrin Region*. British Archaeological Reports, International Series 267. Oxford: British Archaeological Reports.

Joyce, Rosemary
2008 "When the Flesh is Solid but the Person is Hollow Inside: Formal Hand-variation in Modelled Figurines from Formative Mesoamerica." In *Past Bodies: Body-Centered Research in Archaeology*, edited by D. Borić and J. Robb, pp. 37–46. Oxford: Oxbow Books.

Kiszely, István
1978 *The Origins of Artificial Cranial Formation in Eurasia from the Sixth Millennium B.C. to the Seventh Century A.D*. British Archaeological Reports, International Series (supplementary) 50. Oxford: British Archaeological Reports.

Lewis-Williams, J. David, and Thomas A. Dowson
1989 *Images of Power: Understanding Bushman Rock Art*. Johannesburg: Southern Book Publishers.

Mallowan, M. E. L., and J. Cruikshank Rose
1935 "Excavations at Tall Arpachiyah, 1933." *Iraq* 2: 1–179.

Mauss, Marcel
1967 *The Gift: Forms and Functions of Exchange in Archaic Societies*. Translated by I. Cunnison. New York: Norton.

McAdam, Ellen
2003 "Things Fall Apart, The Centre Cannot Hold." In *Culture through Objects: Ancient Near Eastern Studies in Honour of P. R. S. Moorey*, edited by T. F. Potts, M. Roaf, and D. L. Stein, pp. 161–88. Oxford: Griffith Institute.

Meiklejohn, C.; Anagnostis P. Agelarakis; A. Akkermans; E. L. Smith; and R. Solecki
1992 "Artificial Cranial Deformation in the Proto-Neolithic and Neolithic Near East and Its Possible Origin: Evidence from Four Sites." *Paléorient* 18: 83–97.

oi.uchicago.edu

Merpert, N., and R. M. Munchaev

1993a "Yarim Tepe I: The Upper Hassuna Levels." In *Early Stages in the Evolution of Mesopotamian Civilization: Soviet Excavations in Northern Iraq*, edited by N. Yoffee and J. J. Clark, pp. 73–114. Tucson: University of Arizona Press.

1993b "Burial Practices of the Halaf Culture." In *Early Stages in the Evolution of Mesopotamian Civilization: Soviet Excavations in Northern Iraq*, edited by N. Yoffee and J. J. Clark, pp. 207–24. Tucson: University of Arizona Press.

Meskell, L. M.

1995 "Goddesses, Gimbutas and New Age Archaeology." *Antiquity* 69: 74–86.

Meskell, Lynn; Carolyn Nakamura; Rachel King; and Shahina Farid

2008 "Figured Lifeworlds and Depositional Practices at Catalhoyuk." *Cambridge Archaeological Journal* 18(02): 139–61.

Molleson, Theya, and Stuart Campbell

1995 "Deformed Skulls at Tell Arpachiyah: The Social Context." In *The Archaeology of Death in the Ancient Near East*, edited by S. Campbell and A. Green, pp. 45–55. Oxbow Monograph 51. Oxford: Oxbow Books.

Ortner, D. J.

1996 "Artificial Cranial Deformation of a Human Skull from Choga Mish." In *Chogha Mish* 1. *The First Five Seasons of Excavations: 1961–1971*, Part 1: Text, by P. Delougaz and H. J. Kantor; edited by A. Alizadeh, pp. 319–22. Oriental Institute Publications 101. Chicago: The Oriental Institute.

Özbek, M.

1974 "A Propos des déformation crâniennes artificielles observées au Proche-Orient." *Paléorient* 2: 469–76.

2001 "Cranial Deformation in a Subadult Sample from Değirmentepe (Chalcolithic, Turkey)." *American Journal of Physical Anthropology* 115: 238–44.

Polhemus, Ted

1978 *Social Aspects of the Human Body: A Reader of Key Texts*. Penguin Education. New York: Penguin Books.

Pollock, Susan

1999 *Ancient Mesopotamia: The Eden that Never Was*. Cambridge: Cambridge University Press.

Riefenstahl, Leni

1976 *People of Kau*. New York: Harper & Row.

Roach-Higgins, M. E., and J. B. Eicher

1992 "Dress and Identity." *Clothing and Textiles Research Journal* 10: 1–8.

Roberts, Allen F.

1988 "Tabwa Tegumentary Inscription." In *Marks of Civilization: Artistic Transformations of the Human Body*, edited by A. Rubin, pp. 41–56. Los Angeles: Museum of Cultural History, University of California.

Robley, Horatio G.

1896 *Moko; or, Maori Tattooing*. London: Chapman & Hall.

Rubin, Arnold

1988 "The Tattoo Renaissance." In *Marks of Civilization: Artistic Transformations of the Human Body*, edited by A. Rubin, pp. 233–64. Los Angeles: Museum of Cultural History, University of California.

Safar, Fuad; Mohamed A. Mustafa; and Seton Lloyd

1981 *Eridu*. Baghdad: Ministry of Culture and Information.

Schiffmacher, Henk

1996 *1000 Tattoos*. Cologne: Taschen.

Şenyürek, M. S., and S. Tunakan

1951 "The Skeletons from Seyh Hoyuk." *Belleten* 60: 431–45.

oi.uchicago.edu

Shilling, Chris
1994 *The Body and Social Theory*. Theory, Culture and Society. London: Sage.

Thomas, Julian
2000 "Death, Identity and the Body in Neolithic Britain." *Journal of the Royal Anthropological Institute*, n.s., 6: 653–68.

Trinkaus, Erik
1982 "Artificial Cranial Deformation in the Shanidar 1 and 5 Neandertals." *Current Anthropology* 23: 198–200.

Turner, B.
1991 "Recent Developments in the Theory of the Body." In *The Body: Social Process and Cultural Theory*, edited by M. Featherstone, M. Hepworth, and B. Turner, pp. 1–35. London: Sage.

Tvetmarken, Cecile L.
2005 An Analysis of the Social Organisation in Ubaid Period Mesopotamia: A Comparative Study of the Southern, and the Central and Northern Regions. B.A. dissertation, University College London.

Ucko, Peter J.
1968 *Anthropomorphic Figurines of Predynastic Egypt and Neolithic Crete with Comparative Material from the Prehistoric Near East and Mainland Greece*. Royal Anthropological Institute, Occasional Papers 24. London: Andrew Szmidla.
1996 "Can We Interpret Figurines." *Cambridge Archaeological Journal* 6: 300–04.

Vertesalji, P.
1989 "Transitions and Transformations: Ubaidizing Tendencies in Early Chalcolithic Mesopotamia." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 227–42. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Voigt, Mary M.
2000 "Çatal Höyük in Context: Ritual at Early Neolithic Sites in Central and Eastern Turkey." In *Life in Neolithic Farming Communities: Social Organization, Identity, and Differentiation*, edited by I. Kuijt, pp. 253–94. New York: Kluwer Academic/Plenum Publishers.

Winter, Irene
1996 "Sex, Rhetoric, and the Public Monument." In *Sexuality in Ancient Art: Near East, Egypt, Greece, and Italy*, edited by N. Kampen, 11–26. Cambridge Studies in New Art History and Criticism. Cambridge: Cambridge University Press.

Woolley, C. Leonard
1955 *The Early Periods*. Ur Excavations 4. Philadelphia: University Museum Philadelphia; London: British Museum.

oi.uchicago.edu

9

UBAID HEADSHAPING: NEGOTIATIONS OF IDENTITY THROUGH PHYSICAL APPEARANCE?

KIRSI O. LORENTZ, *Newcastle University*

INTRODUCTION

Current debates on the meaning of the large expanse of Ubaid and Ubaid-related material culture (such as pottery and to some extent particular types of architecture) face a problem similar to all archaeological investigations geared towards sociocultural interpretation: whether, or to what extent, similarities in material culture relate to common sociocultural practices or identity. While pots do not equal people, other aspects of human practice that leave material traces may give more direct access to the demarcation of similarity and difference, or identity. These often pertain to the human body and its elaboration. Thus, while there are multiple problems in studying identity through pottery (Hodder 1982), there is another way forward: bodily appearance and its elaboration are often closely linked to identity in human societies (Sorensen 1991; Marcus 1993; Treherne 1995; Fisher and DiPaolo Loren 2003).

Many human societies employ visual bodily markers of sociocultural difference to denote gender, ethnic, and/or status differences. Such bodily markers include aspects of dress, body techniques (such as a style/manner of walking), and body modifications (both temporary and permanent). Many of these visual markers of difference involve the human body directly, and some are accessible in the archaeological record through the study of human remains.

While some forms of bodily elaboration and ornamentation are transient in that they can be instigated as well as removed by an agent at will (such as clothing, hairstyles, jewelry, piercings, body paint), there are other forms of bodily modifications that do not allow this fluidity, but are permanent once instigated. These include a variety of modifications based on redirecting growth, or the removal of parts of the body. While removal of parts of the body (severing fingers, scarring, or extracting teeth) can be instigated by the individual affected, the modifications based on redirecting growth (foot binding, headshaping) are necessarily instigated by others, the caretakers of the individual in question, during the period of infancy and childhood. As such, modifications based on the manipulation of the human body during its period of growth are highly suited to denoting forms of identity that are pre-determined and envisaged to be permanent for the individual throughout their lifetime.

The peoples that used the ceramic style called Ubaid are no exception: they also denoted aspects of sociocultural difference, or identity, through their bodies. A particularly striking form of visual differentiation in use on at least some of the Ubaid and Ubaid-related sites is headshaping, also known as cranial deformation or modification (for discussions on the connotations and theoretical implications of the different terminologies, see Lorentz 1998, 2003a).

Headshaping denotes the intentional modification of the human head form in infancy. Within a particular time window, between birth and the second year, the growth vectors of the infant cranium can be restricted by the use of a cradleboard, bandages (fig. 9.1), or other devices secured to the head. The cranial bone element growing fastest at this particular time period is the parietal, and thus this

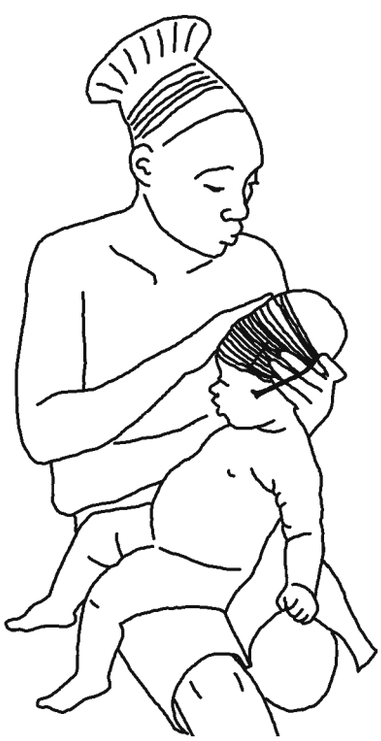


Figure 9.1. Mangbetu woman readjusting the headshaping bandages of an infant (redrawn after Cotlow 1966)

oi.uchicago.edu

region shows usually the most notable changes. The restricting devices must be used consistently, over a considerable period of time, in order to have a lasting impact.

Rather than treating headshaping as a curiosity (Dingwall 1931; Chippaux 1961; Gerszten and Gerszten 1995), or relegating it to purely physical anthropological treatises on its morphological effects (e.g., Anton 1989; White 1996), it is time to reassess the potential of a systematic analysis of headshaping to elucidate archaeological questions of wider interest, in a manner aligned with cutting-edge bioarchaeological theorizing (Sofaer 2006; Lorentz 2008b). This should take into account context and cultural meanings, and the particular characteristics of headshaping that make it particularly apt as a sociocultural marker. Headshaping is highly visible and permanent, as well as bounded to a particular individual human body — characteristics making it highly suited to the sociocultural denotation of similarity and difference among people. Thus studies of the occurrence, prevalence, and variation in types of headshaping within a particular period and/or culture complex may allow us access to identity in a way that artifact studies are currently unable to do.

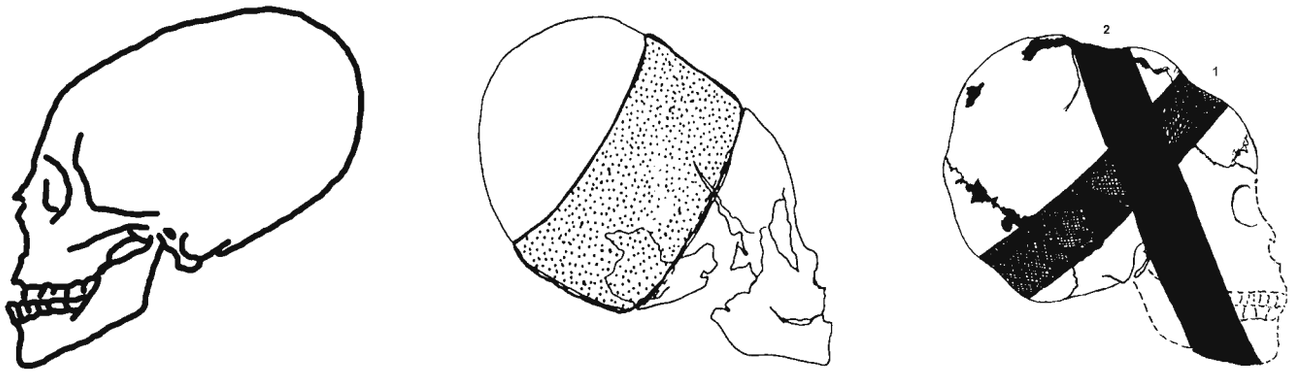
This paper reviews the current state of evidence for headshaping in the Near East, particularly in what are deemed Ubaid and Ubaid-related contexts, and argues that a particular type of headshaping, the circumferential type, overlaps in large areas with the Ubaid and Ubaid-related material-culture zone evident in southern Mesopotamia and the lowlands of southwestern Iran, northern Mesopotamia, eastern Turkey, the valleys of the Zagros Mountains, and the western shores of the Gulf (Pollock 1999: 12). Prior to discussing the headshaping evidence in detail at the scales of individual sites, sets of sites, and regions, some theoretical and methodological considerations are offered. A scrutiny of currently available data is followed by a discussion attempting to evaluate various interpretations of the chronological and spatial patterning visible in the data. Bioarchaeological studies on headshaping in historically documented instances and ethnographic case studies are used to illustrate a range of sociocultural uses to which differential headshaping was put, in cross-cultural contexts. Avenues for future research are suggested, highlighting the multiple possibilities offered by current bioarchaeological techniques and analytical approaches, as well as the importance of conscientious recovery and curation of human skeletal remains.

FROM BONES TO BODIES: METHOD AND THEORY

Modification of human head shape has appeared independently a number of times throughout the Old and New Worlds (Meiklejohn et al. 1992: 83). While there are several different types of headshaping known from various parts of the world, with corresponding typologies devised by physical anthropologists (Imbelloni 1938; Fürst 1933), headshaping types in the Near East and eastern Mediterranean regions fall to three main categories: (1) anterior-posterior, (2) post-bregmatic, and (3) circumferential (Lorentz 2003a, 2004, 2005, 2006, 2008c). Each category contains several sub-types and variations. The anterior-posterior type involves a restriction to growth in the anterior-posterior direction, usually brought about by the use of a cradleboard, or binding platelike artifacts to the back and front of the infant head. The anterior-posterior restriction redirects the growth of the braincase, causing it to expand more laterally and superiorly. The post-bregmatic type involves a restriction to growth on the superior aspect of the cranium, just posterior to the bregma (an osteometric point; see, e.g., Schwartz 1995), most likely brought about by securing a flat artifact on top of the head. This type of headshaping seems unique to late prehistoric Cyprus and thus does not concern us further here. The final main type occurring in the Near East is the circumferential type (fig. 9.2a), involving circumferential restriction to growth brought about by one or more bandages tied around the infant's head (fig. 9.1) during the period of rapid cranial growth. This causes the braincase to expand superior-posteriorly, causing an elongated appearance to the head thus treated. There are two sub-types of circumferential headshaping during the Chalcolithic, the one-band type (fig. 9.2b) and the two-band type (fig. 9.2c). The latter involves the sequential introduction of two successive bands, while the former employs one band only (Özbek 2001; Lorentz 2008c).

Anterior-posterior-type headshaping occurs very early on, with evidence from sites such as Aceramic Jericho and the Cypro-PPNB water wells in Kissonerga-Mylouthkia in Cyprus (Kurth and Rohrer-Ertl 1981; Kurth 1980; Peltenburg et al. 2001). Anterior-posterior headshaping probably originates in observations of the occipital flattening caused by such infant-care practices as cradleboarding (Lorentz 2003a). It is only later on when custom-made devices, independent of childcare artifacts, are used for modifying the head shape. Thus, while light anterior-posterior modification may arise as a side effect of infant-care practices, the circumferential and post-bregmatic forms arise

oi.uchicago.edu



a b c

Figure 9.2. (*a*) Circumferential-type headshaping (cranium 117b from Byblos, redrawn after Özbek 1974); (*b*) one-band-type circumferential headshaping (from Değirmentepe, after Özbek 2001: fig. 4b); (*c*) two-band-type circumferential headshaping (after Özbek 1974); the image shows the location of sequentially introduced bands (1 precedes 2; see Lorentz 2008c). Not to any scale

from processes intentionally geared toward modifying the head form. Lambert (1979) regarded the circumferential headshaping occurring at Ganj Dareh (ca. 7500–6500 B.C.) as the earliest reported case of headshaping in the Near East, while Meiklejohn and colleagues (1992) report on the skeletal remains from Shanidar Cave Proto-Neolithic cemetery as displaying headshaping of a different type (see below), predating the Ganj Dareh material by at least a millennium (1992: 87). According to Meiklejohn and colleagues, the only reported cases of Near Eastern headshaping clearly older than those reported by them (Shanidar, Ganj Dareh, and possibly Tepe Ghenil and Bouqras) come from the Shanidar Cave 1 and 5 Neanderthals (Trinkaus 1982), which, however, have been queried (Meiklejohn et al. 1992: 84). Rather than looking for the oldest reported evidence for any kind of headshaping, this paper is concerned with the origin, spread, and cultural context of a particular type of headshaping, the circumferential type. As discussed above, the three main types of headshaping reported from the region are instigated by the use of very different kinds of devices, and they probably had different trajectories of origin.

Headshaping is recognized in the archaeological record by macroscopic examination of the cranium or cranial fragments. The parietal bones are usually the most affected cranial elements in all the different types of headshaping, due to the coincidence of their rapid growth with the time window within which headshaping can be instigated. Thus, even in highly fragmentary crania, it is often possible to confirm or rule out the presence of headshaping, when parietal fragments are present (for a summary of analytical procedures and recording techniques relevant to headshaping, see Lorentz 2008d).

While many treatises on headshaping have focused on the description of morphological changes, not necessarily observable to the living people in the past, it is important to consider the sociocultural use of headshaping. Theoretically informed bioarchaeological approaches to human skeletal remains attempt to use analyses of human skeletal remains to elucidate archaeological questions (Sofaer 2006; Lorentz 2008b). In the case of headshaping, such approaches draw attention to the visibility of headshaping, the processes through which headshaping can be instigated, and the ways in which the plasticity of the human cranium could have first been observed and subsequently exploited intentionally (Lorentz 2003a, 2008c).

When approaching headshaping as a cultural phenomenon, rather than a purely physical anthropological one, it is useful to view it through its potential to mark similarity or difference among people. Visual markers of sociocultural difference may be theorized as forms of physical capital (Shilling 1993; Bourdieu 1977). Physical capital (a term used in Shilling 1993 denoting acquired bodily manifestations with sociopolitical and/or economic advantage) and its display are key elements in complex societies. Specific bodily practices and modifications can be used by social agents to accumulate physical capital. In Prendergast's words, "The body offers us the ground of fabulous potentiality, drawn over by the mappings of a cultural biology on which we act as gendered individuals 'endlessly becoming'" (Prendergast 2000: 124).

oi.uchicago.edu

Headshaping is a form of body modification that can be used as a visual marker of sociocultural difference, and ethnographic evidence shows that headshaping has been employed to denote gender, ethnic, and/or status differences. In the following, evidence for headshaping on Ubaid and Ubaid-related sites is described and discussed.

HEADSHAPING AND THE UBAID

A survey of the occurrence and prevalence of headshaping in Ubaid or Ubaid-related sites is currently hampered by incomplete recovery (entire skeletal series have been lost for analysis, e.g., at Susa, Parchineh, and Hakalan; Haerinck and Overlaet 1996), lack of detailed publication of human skeletal remains, and scarcity of information on the current whereabouts of skeletal collections. It should also be noted that on many Ubaid and Ubaid-related sites, the location of any burial ground eludes researchers (Akkermans and Schwartz 2003). However, existing evidence already indicates the widespread use of circumferential headshaping in this period, in both the area traditionally seen as the "heartland" of Ubaid, and the regional manifestations of the Ubaid, for example, southeast Turkey (e.g., Değirmentepe, Seyh Höyük). I now briefly look at a number of sites from where skeletal material has been reported in some detail, and/or from where skeletal material has been available for analysis by the author. While this selection has been restricted by access to skeletal material and availability of published data, it is hoped that this paper stresses the need for more detailed publications on skeletal remains (including data on occurrence, prevalence, and types of headshaping) and opportunities for accessing material from more sites. In the following, the material currently available to the author, either firsthand or through detailed publications, is examined, particularly bearing in mind the following questions: (1) As far as can be ascertained with currently available evidence, are all individuals during the Ubaid head shaped? Or are there skeletal series where some individuals are head shaped, and others are not? This is a question of prevalence. (2) Do all head-shaped individuals display the same degree of headshaping? (3) What kinds of sociocultural difference could headshaping mark? To what extent was headshaping used to denote differences in status, gender, ethnicity, or sociocultural group affiliation?

SITES WITH EVIDENCE FOR HEADSHAPING

Eridu

The number of individuals recovered from Late Ubaid Eridu amounts to 206. Coon states in his preliminary report that "all of the crania had been deformed in one fashion or another, presumably after burial, by earth pressure. This had made them look superficially like certain Maya Indian crania, deformed intentionally in infancy" (Coon 1949: 103). While Coon is thus sceptical about the cultural origin of the shape modification of the Eridu crania, there are several lines of evidence that support the view that the Eridu crania were modified by circumferential headshaping. Several scholars mention the Eridu material as displaying circumferential headshaping (e.g., Kiszely 1978; Lambert 1979; Meiklejohn et al. 1992). Coon only looked at a very small and somewhat biased sample, stating that "the six least distorted skulls, and two of the most complete extra mandibles were cleaned" (Coon 1949: 103). Cranial shape distortion by earth pressure is often asymmetrical and results in characteristic fracturing of the cranial surfaces (Molleson and Campbell 1995), unlike the intentional modification during life. Other cases where individual researchers have been reluctant to accept cultural modification of cranial shape in vivo include work by Charles (1965a; 1965b) in Cyprus, on the skeletal series from the Late Bronze Age Akhera and Pendayia. In this case other authorities (Schwartz 1974; Lorentz 2003a) have subsequently proved beyond any doubt that the shape modification seen in these crania is cultural in origin and was conducted during life. It is clear that a detailed re-analysis of the Eridu material, as well as many other series from the region, would be needed to make any assessment of presence or absence of headshaping, its extent, and any possible patterning as to sex, status, and other forms of difference.

Choga Sefid

The site has been dated to circa 7,500–5,000 uncal. B.P. (Hole 1977). Remains of three individuals were recovered from the Sefid phase. According to the excavator of the site, all these were affected by circumferential-type

oi.uchicago.edu

headshaping: "The burials in Zone A4 at Choga Sefid show traces of ochre and were probably placed on mats but in an extended position and without ornaments. The skulls show extreme cranial deformation" (Hole 1977: 91). No age or sex data have been published, preventing further analysis along these demographic differentials.

Chogha Mish

Human skeletal remains have been recovered from the Middle Village period (Hole 1987) of Chogha Mish, that is, the fifth millennium (4500–4000 B.C.; Ortner 1996: 321). Only one cranium was recovered and reported on (Ortner 1996), and this cranium displays clear circumferential-type headshaping. The skeletal sex of this individual cannot be estimated due to poor preservation (no sex diagnostic features were recovered).

Seh Gabi

The Middle Village-period (Hole 1987) skeletal material from Seh Gabi consists of infants and fetuses only, and thus sex cannot be estimated by traditional morphological methods. According to Meiklejohn and colleagues (1992), the crania of the infants display circumferential headshaping. The number of individuals is not given. A re-examination of this material, including DNA analysis where possible, would throw light on the issue of prevalence, as well as any patterning according to sex.

Qumrud

Only one cranium has been recovered from a fifth-millennium context on this site in the province of Qom in Iran (F. Foruzanfar, pers. comm.). It displays clear two-band circumferential headshaping (personal observation by the author). The cranium belongs to a sub-adult, and thus sex cannot be estimated through skeletal morphology. Unfortunately, there is currently only this one cranium available from the site. Future excavation at this locality would undoubtedly throw light on the practice of circumferential headshaping in the area.

Tell Arpachiyah

Max Mallowan excavated an extensive Ubaid cemetery with forty-five graves including multiple inhumations, and five or more Ubaid burials elsewhere, as well as nine Halaf burials (Mallowan and Rose 1935), but only twelve of the skeletons these burial features contained have been analyzed and reported in any detail (Mallowan 1969; Molleson and Campbell 1995). Molleson and Campbell date one of these twelve securely to the Halaf (Molleson and Campbell's Skull A; Mallowan's Skull 11), and they suggest that two further skeletons may or may not be Halaf rather than Ubaid in date (Molleson and Campbell's Skulls B and C; Mallowan's Skulls 10 and 7, respectively). The Ubaid burials date to the later fifth millennium, around 4300 B.C. (Molleson and Campbell 1995: 46–47).

According to Molleson and Campbell, both Halaf and Ubaid crania were modified during life, but they fail to discuss in detail any differences in the type of headshaping present. While two of the three potentially Halaf skeletons are indeterminate as to whether any cranial modification is present (Molleson and Campbell 1995: 49, 53), the third Halaf cranium (Molleson and Campbell's Skull C; Mallowan's Skull 7) seems to have been modified by a type of headshaping different from that used for the Ubaid individuals, judging by their sagittal outlines (Molleson and Campbell 1995: 48, fig. 9.2). In order to assess which headshaping types are present at Tell Arpachiyah, and to reach firm conclusions on whether circumferential headshaping is confined to the Ubaid contexts at Tell Arpachiyah, as it currently seems to be, a reassessment of the material is needed.

According to Molleson and Campbell, both females and males were modified at Tell Arpachiyah, but not all individuals were treated in this way (table 9.1). Thus it seems that at Tell Arpachiyah there is differential use of headshaping at the most basic level (headshaping either present or absent). The amount of detail published currently does not allow assessment of the extent of modification in different crania. Where information is available (deduced from drawings and photographs in Molleson and Campbell 1995) it seems that both one-band- (Skulls G and D) and two-band-type (Skull E) circumferential headshaping is present within the Ubaid skeletal series at Tell Arpachiyah. This can only be verified through a re-examination of the skeletal material. At present the Tell Arpachiyah material does not contradict the evidence from other Ubaid and Ubaid-related sites.

oi.uchicago.edu

Table 9.1. Tell Arpachiyah crania reported by Molleson and Campbell (1995)

Cranium ID (Molleson and Campbell 1995)	*Cranium ID (Mallowan 1969)*	*Sex*	*Age*	*Date*	*Headshaping*	*Headshaping Type**
A	11	Cba (juvenile)	2–3 yrs	Halaf	Indeterminate	—
B	10	Male	Young adult	Halaf?	Indeterminate	—
C	7	Male	Young adult	Halaf?	Present (type not stated)	?
D	2	Female	Mature adult	Ubaid	Present (type not stated)	C
E	1	Female	12–16 yrs	Ubaid	Present (type not stated)	C
F	8	Male	Young adult	Ubaid	Present (type not stated)	—
G	3	Female	Mature adult	Ubaid	Present (type not stated)	C
H	3	Female/male	Young adult	Ubaid	Present (type not stated)	C
I	9	Female	Mature adult	Ubaid	Absent	—
J	7	Male	No data	Ubaid	Absent	—
K	5	Male	No data	Ubaid	Absent	—
M	4	Female	Young adult	Ubaid	Absent	—

* Headshaping type is deduced from sagittal outlines presented in Molleson and Campbell 1995: fig. 9.2. Only six of the crania are included in this figure (Crania H, I, G, C, D, and E). This data should be viewed as provisional until verified by re-analysis of the skeletal material (C = circumferential).

Telul eth-Thalathat

A number of burials of both adults and children were discovered at Telul eth-Thalathat, one of which Egami (1958) mentions in more detail, stating that in the Ubaid levels the skeletal remains of an infant were found in a jar, and that the head of this infant (Skeleton No. 42) had been "artificially deformed." Egami does not elaborate further (in English) on the type or extent of this modification, or whether such a modification is present in any of the other skeletons.

Tell Madhhur

Five skeletons of Ubaid date were excavated at Tell Madhhur (Downs 1984). All of these are infants. Downs mentions that the skull of a 2–3-year-old child "was possibly deformed by warping, or the deformation could have been caused by head binding" (Downs 1984). She does not elaborate further on the type or extent of the modification, or whether such a modification is present in any of the other skeletons.

Seyh Höyük

The number of individuals recovered from Chalcolithic Seyh Höyük and analyzed by Şenyürek and Tunakan (1951) is five. All five crania are modified, and all display circumferential headshaping (fig. 9.3). Of the five crania published originally by Şenyürek and Tunakan only two are currently available to re-examination (curated at the University of Ankara; the location of the other crania is not known). A re-examination by the author established that both sub-types of circumferential headshaping, the so-called one-band and two-band varieties, are represented

oi.uchicago.edu

in this small sample. Moreover, the crania show varied intensity of modification. No males are present in the preserved sample. Şenyürek and Tunakan report, however, two male crania (numbers 1 and 2), and they note a difference in the extent of modification between females (more extensive modification) and males. Judging by the photographs in Şenyürek and Tunakan (1951: pls. 36–40), it seems possible that it is not only the extent, but also the sub-type, of modification that differs: the male crania display a much slighter circumferential headshaping, seemingly of the two-band type, while the female crania show more intense modification by the one-band sub-type. Inspection of photographs can, however, never substitute for analysis of the skeletal material itself, and thus these views can only be provisional and can only be verified fully if the missing Seyh Höyük crania are located.

Figure 9.3. Seyh Höyük crania, left lateral view (courtesy of University of Ankara; photograph by author). Scale 1:2

Değirmentepe

The number of individuals analyzed by Özbek (2001) from this Ubaid-related site in southeast Turkey is thirty-one. The skeletal material dates to the "second half of the fifth millennium B.C., uncalibrated" (Özbek 2001: 238). The number of individuals affected by cultural modification of the head is thirteen, ranging in age from one month to fourteen years old. There are currently no details on any possible adult individuals recovered from the site (Özbek, pers. comm.). All individuals analyzed to date are sub-adults, and thus no sex estimation based on skeletal morphology is possible. Both the one-band and two-band varieties of circumferential headshaping are present.

OTHER UBAID-PERIOD SKELETAL MATERIAL

There are other Ubaid and Ubaid-related sites where skeletal material has been recovered, but published information on the presence or absence of headshaping, and even the demographic basics (age, sex), is often unavailable. Access for re-examination of the materials is often complicated by lack of information on where skeletal remains are currently held. A database of Ubaid skeletal remains and their current locations not only would advance physical anthropological research, but also could facilitate other research foci, such as dating. Further complications for a more inclusive study include the poor preservation, and sometimes poor recovery, of skeletal remains (see, e.g., Susa, Parchinah, and Hakalan, above). In the following pages a few sites where skeletal material has been recovered but not published in detail are discussed, indicating where further analyses would be of importance. This list is by no means exclusive, and it should be noted that even where skeletal remains have been published in some detail, "many cases of artificial deformation must have been overlooked" (Molleson and Campbell 1995: 49) due to lack of restoration of cranial material, difficulties in differential diagnosis (see, e.g., Coon 1949), or unfamiliarity of analysts with this cultural practice and its diagnostics.

oi.uchicago.edu

Tell Abada

A total of 127 urn burials of children have been reported from Tell Abada, level II, dated to the late Ubaid 2 or early Ubaid 3 (Jasim 1985: 183). Jasim gives no information on whether any modification of the cranial shape is present.

Tell al-'Abr

Skeletal remains dating to the fifth millennium have been recovered from the site of Tell al-'Abr, but these have not yet been thoroughly assessed to ascertain presence or absence of headshaping.

Tell Aqab

Seven Ubaid graves were discovered in Trenches 1 and 4 at Tell Aqab. No more specific date for the skeletal material is available. Davidson and Watkins (1981) give no further information on the skeletal remains, or whether headshaping is present.

Tell Kashkashok II

Koizumi (1993) reports briefly on the Ubaid cemetery at Tell Kashkashok II (see also Matsutani 1991), mentioning "over one hundred tombs … sixty-three of which have been registered." There is no further information on the skeletal remains, or whether headshaping is present.

Tell Kosak Shamali

The two volumes published so far on Tell Kosak Shamali (Nishiaki and Matsutani 2001, 2003) do not include a skeletal report, nor any mention of headshaping.

Tell Mashnaqa

The Danish Khabur Expedition has conducted archaeological excavations since 1990 at Tell Mashnaqa in northeastern Syria and located at least twenty-four human burials (Lynnerup et al. 1997: 91). However, "even though outlines of complete skeletons and bones could be discerned in the graves, the human remains were very delicate and fragmented, precluding the retrieval of intact skeletal material" (ibid., p. 91). While some Mashnaqa bones (burial XV, dating back ca. 7,000 B.P.) were analyzed with the aid of CT scanning and stereolithographical modeling, no attempt was made to reconstruct the highly fragmented cranium of burial XV, preventing any assessment of headshaping. Furthermore, the Mashnaqa material may simply be too poorly preserved to allow for assessment of headshaping, as is the case also at Tell Kurdu.

Tell Kurdu

While human skeletal remains from more than fifteen fifth-millennium B.C. individuals have been retrieved from the site of Tell Kurdu, none of the crania is complete enough to allow assessment of presence or absence of headshaping (personal observation by the author). The presence of a physical anthropologist in the field during any future seasons could circumvent this problem of preservation and recovery, allowing for observations in the field at the point of recovery.

DISCUSSION OF THE SKELETAL EVIDENCE

With this currently available data, unsatisfactory as it is, we can begin to get some answers to the questions above. Where sufficient information has been published, or preservation allows assessment, the Ubaid and Ubaid-related skeletal series discussed above all include culturally modified crania. Among the Ubaid or Ubaid-related skeletal series that are published in sufficient detail or are available for study and complete enough to allow assess-

oi.uchicago.edu

ment, none is without evidence of headshaping. Furthermore, the particular type of headshaping present is circumferential, including both one-band and two-band sub-types. No other headshaping type is known from these sites (in contrast to later archaeological examples of multiple types of headshaping occurring on the same site; see, e.g., Lorentz 2003a, 2004, 2005). While the Eridu series points to a universal prevalence of circumferential headshaping within a mortuary population, the Değirmentepe and Tell Arpachiyah series possibly point to differential modification practices (modified and unmodified). It is also clear that there are differences in degree and sub-type (one-band and two-band types: see fig 9.2b–c, and Özbek 2001) of circumferential headshaping. The Değirmentepe and Seyh Höyük series illustrate this particularly well. At the latter site there may have been differences between male and female head modifications, but the small sample size prevents any firm conclusions.

What is special about circumferential headshaping in the fifth millennium is its wide distribution in Ubaid and Ubaid-related contexts, ranging from Mesopotamia and Iran to eastern Turkey (fig. 9.4). It should be cautioned that much more research on human skeletal remains in the wider region is required to allow conclusions on the full extent of the phenomenon. Currently, however, the widespread use of circumferential headshaping in the fifth millennium seems to largely overlap with material culture traditionally linked to the Ubaid phenomenon. Ideally, we should investigate whether there are any spatial or temporal patterns of headshaping observable within the Ubaid phenomenon, but the resolution of data and sample sizes, together with the unavailability of sufficiently precise dates, does not currently allow this. Better chronological resolution and access to skeletal series from more sites is required in order to investigate these issues.

In order to appreciate the widespread nature of the circumferential-type headshaping during the fifth millennium, and its potential connection to Ubaid spheres of interaction, we need to look at the preceding and succeeding time periods, as well as the surrounding regions.

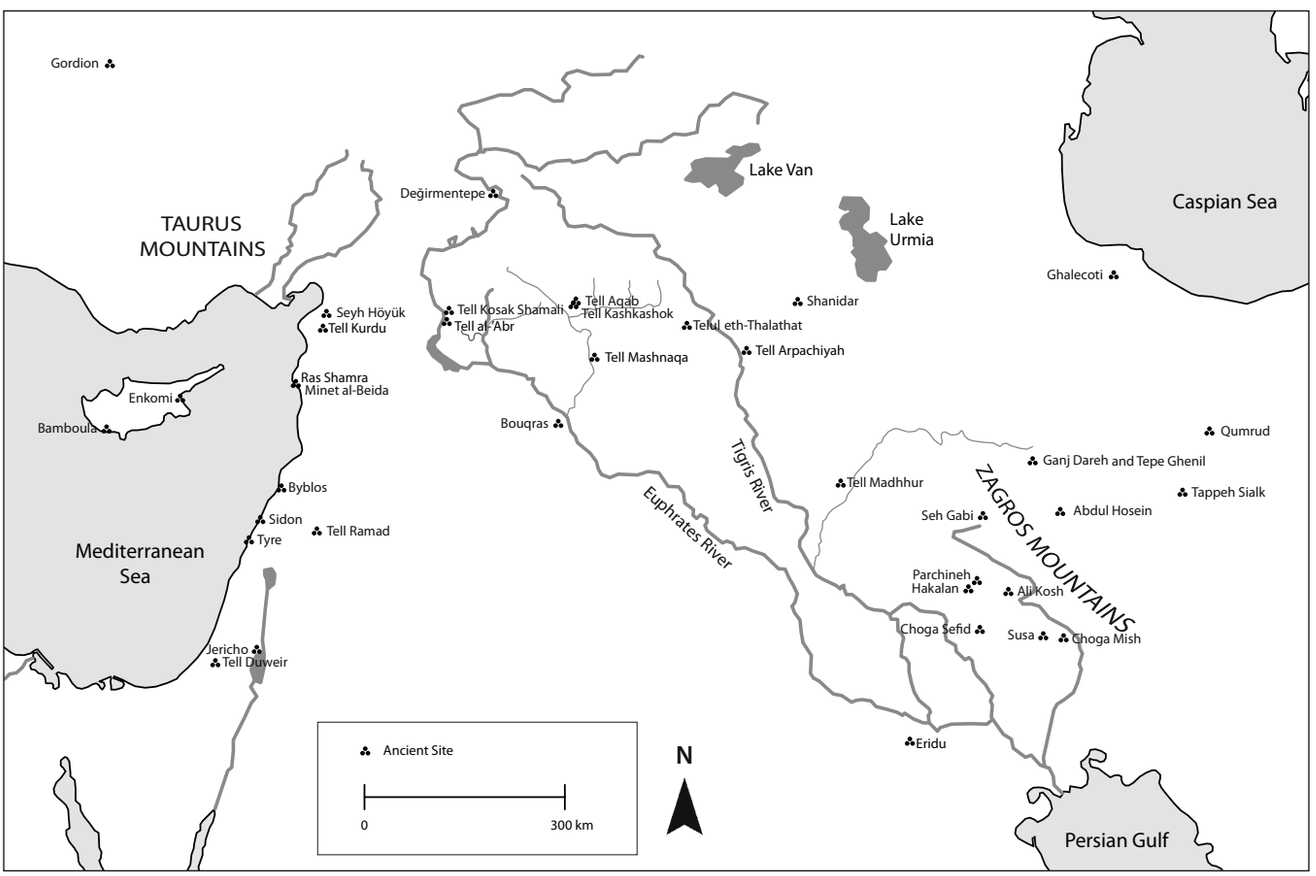


Figure 9.4. Map showing sites mentioned in the text

oi.uchicago.edu

CIRCUMFERENTIAL HEADSHAPING BEFORE THE UBAID PERIOD

As discussed above, circumferential-type headshaping is only one of three types of headshaping occurring in different temporal and spatial contexts in the Near East and the eastern Mediterranean. In order to understand the specific relationship between the widespread use of circumferential headshaping and the Ubaid phenomenon, we need to appreciate the differences among the three main headshaping types and their temporal and spatial trajectories. Early evidence for the anterior-posterior-type headshaping seems to be concentrated in the Levant and the eastern Mediterranean, ranging from the Cypro-PPNB Kissonerga-Mylouthkia wells in Cyprus (Peltenburg et al. 2001) to the PPNA of the Levant (Kurth and Rohrer-Ertl 1981; Kurth 1980). The sub-types of circumferential headshaping known from Ubaid contexts have their origins before the Ubaid period, most likely in the Neolithic of Iran (see below). Post-bregmatic-type headshaping does not make its appearance until the Late Bronze Age, and it seems to be particular to the Late Bronze Age–Early Iron Age of Cyprus.

Meiklejohn and colleagues (1992) report on various head modifications apparently based on the use of bandages in infancy, particularly on four sites: Proto-Neolithic Shanidar Cave (ca. 9000–8500 B.C.), Ganj Dareh Tepe (ca. 7500–6500 B.C.), Tepe Ghenil (late eighth to early fifth millennium B.C.), and Bouqras (6500–5500 B.C.). They state that to their knowledge the only reported case of any type of headshaping older than those reported by them are the Shanidar Cave 1 and 5 Neanderthals (Trinkaus 1982), although this case has been called into question (Meiklejohn et al. 1992: 84). The evidence for headshaping reported from Tepe Ghenil (MNI 2, one individual complete enough for study) and Bouqras (minimum number of individuals [MNI] 6, five individuals studied) is far from secure, as Meiklejohn and colleagues themselves indicate, stating that "we see diagnosis of deformation … as dependent on the presence of unquestionably deformed specimens, as at Ganj Dareh and Shanidar" (1992: 95). Further, Meiklejohn and colleagues indicate that the location of bandages running around the head, causing modification of the head form, is different at Ganj Dareh and the three other sites they report on (1992: 89–91).

Of the twenty-nine Shanidar Cave individuals studied by Meiklejohn and colleagues, only two "show deformation, but we cannot exclude other individuals in the series" (Meiklejohn et al. 1992: 89–91). No photographs or drawings of these Shanidar crania are published by Meiklejohn and colleagues, and their description (1992: 91) seems to indicate that the location of bindings differed from that reported by Özbek at Değirmentepe. Agelarakis does not give further details on headshaping in his skeletal report included in the recent publication of the cemetery in the Shanidar Cave (Agelarakis' MNI 31 [Agelarakis 2004: 164] contradicts Solecki's MNI of 35 in the same volume [Solecki, Solecki, and Agelarakis 2004: 11], and the above-mentioned MNI 29 [Meiklejohn et al. 1992]). He notes only that two individuals show modification of the cranial form in vivo (no skeleton numbers or other unique identifiers are given, no photographs included), without detailing type or extent of the modification (Agelarakis 2004). Until more detailed descriptions, analyses, and photographs of the Shanidar crania are available, it seems wisest to consider the Shanidar modifications as different from the Ubaid circumferential headshaping.

At Ganj Dareh (7500–6500 uncal. B.C.; Meiklejohn et al. 1992) sixty-nine individuals were recovered, and sixty-eight crania were complete enough for assessment of absence or presence of headshaping. Lambert (1979) equates the modification of head form at Ganj Dareh to the circumferential types Özbek reported from Byblos (1974), and the general descriptions and photographs by Meiklejohn et al. (1992) do not contradict this. Thus both the one-band and two-band sub-types seem to be present as far as can be deduced from the preliminary publications by Lambert (1979) and Meiklejohn et al. (1992: 93–94). Both male and female individuals have been modified in this manner, but no data on extent of modification on individual crania are provided by Meiklejohn et al. (1992). A publication by Meiklejoh on the Ganj Dareh material is underway, and it is hoped that more detailed descriptions and images of the type, sub-types, and extent of headshaping on each individual Ganj Dareh cranium will be made available.

Hole reports, "… Ali Kosh Phase burials [ca. 8,500–6,000 uncal. B.P.] are usually in a seated position, wrapped in matting and wearing beads and pendants, while those of the Mohammad Jaffar Phase are flexed and also have ornamentation. In both cases red ochre is evident on the bones and in the Ali Kosh Phase cranial deformation was practiced" (Hole 1977: 91).

At Tepe Abdul Hosein (first half of seventh millennium B.C.), skeletal remains were recovered (Pullar 1990), but not analyzed until recently (Lorentz in prep.). Restoration of the highly fragmented cranial material allowed an assessment of the presence or absence of headshaping. Eleven skeletons with crania or cranial fragments were available for study (table 9.2). Eight of these are adults, and three sub-adults (including a fetus) were found. Four of the

oi.uchicago.edu

adults are female, three male or possible male, while one adult individual cannot be sexed due to its fragmentary nature and lack of diagnostic features. Eight out of the eleven individuals had sufficiently complete crania to allow assessment for the presence or absence of headshaping. Three clear and one possible case of circumferential headshaping were found (fig. 9.5), while two crania showed evidence of anterior-posterior modification. The remaining two adult crania for which assessment was possible did not show any clear signs of modification. All of the above are adults. None of the three sub-adults recovered was sufficiently complete or in a condition to allow assessment.

Table 9.2. Tepe Abdul Hosein individuals with crania

Individual No.	*Context*	*Age*	*Sex*	*Headshaping Type*
13029	H12	A	M	C
19001 Skeleton 2	20L	A	M??	C
10035	11G	A	M	C
11001	10G	A	Cba	C?
13007 (13012)	12H	A	F	AP
16001	15J	A	F	AP
13017	H12	A	F	None
13030	H12	A	F	None
19001 Skeleton 1	20L	SA	—	Cba
10026	11G	SA	—	Cba
15007	H75	SA	—	?

A = adult; SA = sub-adult; F = female; M = male; C = circumferential; AP = anterior-posterior; Cba = cannot be assessed

Thus, according to current knowledge, it is from the eighth millennium B.C. onward that the kind of circumferential-type of headshaping present in later Ubaid contexts emerges, at sites such as Ganj Dareh (Meiklejohn et al. 1992; Lambert 1979), Ali Kosh (Hole 1977), and Tepe Abdul Hosein (a new addition to the corpus of skeletal series displaying headshaping; restored and analyzed by the author in November 2005 in Tehran: Lorentz in prep.). These sites are all located in Iran. In the southern Levant the earliest reported evidence for circumferential headshaping known to the author comes from the site of Byblos, where the skeletal remains are dated to the second half of the fourth millennium B.C. (Özbek 1974). In Anatolia the earliest evidence for circumferential headshaping known

Figure 9.5. Tepe Abdul Hosein cranium AH19001 Skeleton 2, left lateral view, showing circumferential head modification (courtesy of the National Museum of Iran; photograph by author). Scale 1:2

oi.uchicago.edu

to the author derives from Phrygian-period Gordion (personal observation by the author), although other types of headshaping are known from earlier sites (e.g., Bronze Age Karataş; Angel 1968, 1970, 1976). In Cyprus rare instances of circumferential headshaping are known from Late Bronze Age contexts, but no earlier (Angel 1972; Lorentz 2003a).

While evidence for the fifth millennium scarcely allows us to explore the questions of patterning of headshaping according to sex and other forms of difference, the Tepe Abdul Hosein material, together with that from Ganj Dareh, provides interesting glimpses for the preceding periods: at Ganj Dareh both males and females display circumferential headshaping (Meiklejohn et al. 1992), but at Tepe Abdul Hosein all the circumferentially modified crania that can be sexed belong to male individuals, and the anterior-posterior modification is displayed by females only. The circumferential modification displayed by the males is extremely pronounced and of the two-band type. Unfortunately, there is not enough contextual detail in the Abdul Hosein publication (Pullar 1990) to allow an assessment of the contemporaneity and spatial relations of these burials. Thus the hypothesis that differentially modified individuals are not contemporaneous must vie with the alternative hypothesis that males and females were differentially modified at Tepe Abdul Hosein.

One of the questions of central importance when we investigate modifications of the bodily form is the question of intentionality. The extent of the anterior-posterior type of headshaping at Tepe Abdul Hosein is such that it may have come about simply as an unintentional side effect of infant-care practices, such as cradleboarding. This does not exclude the possibility of the intentional exploitation of the cradleboard to this effect, however. On the contrary, in the case of circumferential headshaping, it is clear that it is an intentional modification of the bodily form. The circumferential headshaping cannot arise as an unintentional side effect of infant care practices. Furthermore, the extremely pronounced degree of modification present in the Abdul Hosein crania further supports the position that here it is a question of intentional modification. Based on similar lines of argumentation, the Ubaid circumferential headshaping is clearly intentional.

CIRCUMFERENTIAL HEADSHAPING AFTER THE UBAID PERIOD

After the fifth millennium the widespread use of circumferential headshaping seems to wane. This may, however, be an artifact of the current research situation. Only single sites with evidence of circumferential headshaping are known from later periods, including Byblos (second half of the fourth millennium B.C.; Özbek 1974), Late Bronze Age sites in Cyprus (e.g., at Enkomi and Bamboula; Schwartz 1974; Angel 1972; Schulte-Campbell 1983; Lorentz 2003a), as well as Phrygian Gordion. These sites show the use of circumferential headshaping (together with other headshaping types) as a clear differentiating sociocultural marker: not everyone was modified, and not to the same extent. At Byblos both the one-band and two-band sub-types of circumferential headshaping are present. Özbek interprets the Byblos data as evidence for his model of headshaping being a modification for females only (Özbek 1974, 2001). However, this view has been challenged by various authorities, including Ortner, who cautions us from excepting arguments about single-sex, female-only headshaping based on one partial study of a single site (Ortner 1996; Lorentz 2008c). The evidence predating the spread of Ubaid material culture points to a more complex use of headshaping in denoting difference, as does the research on headshaping and its relation to gender in the surrounding regions (Lorentz 2008c). The resolution and sample sizes of recorded data for the Ubaid and Ubaid-related sites do not currently allow a full assessment of potential patterning of headshaping according to sex, but it is hoped that future work on skeletal material deriving from Ubaid and Ubaid-related contexts will throw light on this issue.

HEADSHAPING OUTSIDE THE UBAID SPHERE

In order to appreciate the extent to which current evidence points to connections between the Ubaid phenomenon and circumferential headshaping, a brief overview of headshaping occurrence, prevalence, and types in non-Ubaid contexts in the Near East and the eastern Mediterranean is needed. The areas with current unpublished and published evidence for headshaping from this wide region include Anatolia, the southern Levant, Iraq, and Iran, as well as Cyprus, Crete, and Greece. It should be noted that what follows is an indicative, but not exhaustive, review,

oi.uchicago.edu

and that further work on the topic is in progress (see Lorentz 2003a for a preliminary review). Furthermore, additional evidence of headshaping is likely to be discovered when more skeletal series are restored and subjected to appropriate morphological analyses.

The earliest forms of headshaping securely attested in the region are the anterior-posterior (e.g., at Cypro-PPNB Kissonerga-*Mylouthkia* in Cyprus [Peltenburg et al. 2001] and Aceramic Jericho [Kurth and Rohrer-Ertl 1981; Meiklejohn et al. 1992]) and the circumferential types (in early Neolithic Iran). The third headshaping type known from the Near East and the eastern Mediterranean, the post-bregmatic type, is much later in occurrence, and typical of Late Bronze Age and Early Iron Age Cyprus (Schwartz 1974; Angel 1972; Schulte-Campbell 1983; Lorentz 2003a). No secure evidence for its occurrence elsewhere has been demonstrated so far, although Angel suggests possible occurrence in Bronze Age Karataş on the south coast of Turkey (Angel 1968, 1970, 1976). The Karataş remains need to be re-analyzed in order to verify Angel's suggestion. Thus intentional headshaping practices were in use at various areas and time periods from the earliest Neolithic to at least the beginning of the Iron Age. References to anterior-posterior headshaping from later periods exists, but need to be re-examined in order to assess the intentionality of the modifications (Lortet 1884; Arensburg and Hershkovitz 1988; Dingwall 1931).

The circumferential-type headshaping evidence from early Neolithic and fifth-millennium sites from Iran is discussed above, leaving us the task of elaborating on the anterior-posterior-type headshaping known from Iran. Anterior-posterior type is present at Tappeh Sialk (fifth to fourth millennium B.C.) and the more recent sites of Ghalecoti (250–200 B.C.) and Bolghasian (A.D. 622–700), according to Soto-Heim (1986) and Vallois (1937). Recent evidence for the circumferential-type modification comes from northern and eastern Iran (Sistan region; Pardini 1968; Soto-Heim 1986; personal observation by the author).

In Iraq the earliest, debated case comes from the Mousterian levels from the Shanidar Cave (Trinkaus 1982). The 9000–8500 uncal. B.C. levels from the same cave also produced evidence of headshaping according to Meiklejohn and colleagues (1992), but the type of headshaping securely attested in two of the twenty-nine individuals needs to be clarified (see above). The Kurds of the Shanidar area are also said to show evidence of circumferential modifications in recent times (Meiklejohn et al. 1992). The Eridu evidence is discussed above.

The evidence from Syria and the southern Levant is likewise patchy, and the types of headshaping have not always been noted in publications. Headshaping has been found at Neolithic Tell Ramad (no type noted in publications; see, e.g., Ferembach 1970; Arensburg and Hershkovitz 1988), Bouqras (6500–5500 B.C., type not clear; Meiklejohn et al. 1992), Ras Shamra (eighteenth to thirteenth centuries B.C.; Soto-Heim 1986; Vallois and Ferembach 1962), and Minet el-Beida (fourteenth to thirteenth centuries B.C.; Soto-Heim 1986; Vallois and Ferembach 1962). Skeletons from Byblos (second half of fourth millennium B.C.; Özbek 1974) and Sidon (fourth to fifth centuries A.D.; Özbek 1974) show evidence of circumferential headshaping. Phoenician crania (Lortet 1884; Arensburg and Hershkovitz 1988) and recent Maronites, as well as inhabitants of Tyre and Sidon (end of nineteenth century), display anterior–posterior-type headshaping according to some scholars (Lortet 1884; Arensburg and Hershkovitz 1988; Dingwall 1931). Crania from Aceramic Jericho show anterior-posterior headshaping (Kurth and Rohrer-Ertl 1981; Meiklejohn et al. 1992). Tell Duweir, from the eighth to seventh centuries B.C., shows the circumferential type (Risdon 1939; Özbek 1974), and Hellenistic to Byzantine En Gedi, Yavne Yam, and Jericho show anterior-posterior type of headshaping (Arensburg and Herskovitz 1988).

Headshaping is present within Cypriot human skeletal remains ranging from the Cypro-PPNB to the Iron Age. There is no evidence, however, for headshaping in the Ceramic Neolithic skeletal series. This may be a function of the small size of these collections. The absence of headshaping in the Chalcolithic appears to be more real, as none of the sizeable human skeletal series from settlements (such as Lemba-Lakkous and Kissonerga-Mosphilia) or cemeteries (e.g., Souskiou-Laona) shows evidence of headshaping. The headshaping types attested in Cyprus are the anterior-posterior (occipital flattening), post-bregmatic, and circumferential (two-band variety) types (Lorentz 2003a, 2004, 2005, 2008c). Chronological expression of these types is the following: anterior-posterior type occurs in the earliest human remains discovered on the island (Cypro-PPNB) and continues to the Late Bronze Age. Post-bregmatic type is first evidenced during Late Cypriot Bronze Age II and continues in use until the Iron Age. The circumferential type is rare, and the few examples discovered are from Late Cypriot Bronze Age IIA/IIB and Late Cypriot Bronze Age IIIA contexts (Lorentz 2003a).

Evidence for anterior-posterior headshaping in Greece, from Neolithic Tharrounia, is now available (Lorentz 2008d). Also, there is evidence for the circumferential type during recent times from Yerania village (Hasluck 1947), Athens, and Zalka (Tiflis) district (Dingwall 1931). Sporadic and vague mentions of headshaping in Crete

oi.uchicago.edu

have also been made by Fürst (1933), Kurth and Rohrer-Ertl (1981), and Dingwall (1931). It is clearly time to re-evaluate this material.

The evidence available to date, however insufficient it may be, seems to suggest that, while anterior-posterior headshaping is known from early sites in the Levant and the eastern Mediterranean, all the earliest evidence for circumferential headshaping in the Near East concentrates in Iran, including sites such as Ganj Dareh, Abdul Hosein, and Ali Kosh. Current evidence suggests that the occurrence and prevalence of circumferential headshaping was at its height during the fifth millennium, seemingly overlapping with Ubaid-related material culture. As such, circumferential headshaping could provide an interesting additional form of material evidence for understanding the Ubaid phenomenon. This is particularly interesting as regards the debate on the kinds of models that might best explain the wide spread of Ubaid-related material-culture characteristics. The earlier origins of circumferential headshaping in Iran, together with its widespread use in Ubaid contexts, might be taken to support a model based on interaction spheres, where communities buy into material practices originating in different parts of the wider region. How may we begin to interpret the impressive extent to which this very particular type of body modification seems to be in use during the fifth millennium?

DISCUSSION

The results of research on the currently accessible prehistoric series of human skeletal remains and published data from the region indicates that the widest spread of circumferential headshaping occurs during the fifth millennium, probably related to the Ubaid phenomenon. The origins of circumferential headshaping are much earlier, however, at least in the eighth millennium B.C., and its occurrence in the earlier periods seems to be limited to a very particular region. It is only later, seemingly in connection with the Ubaid phenomenon, that the circumferential-type headshaping begins to be used throughout a much larger region, occurring as far as Değirmentepe and Seyh Höyük. After the Ubaid, sporadic occurrences of circumferential headshaping are known, but if and how these relate to one another and to the preceding traditions remains to be shown. One must of course be cautious at this stage — is there a real pattern, or are we seeing an artifact of the current research situation, with vagaries of preservation, recognition, recovery, and publication?

There is one aspect that makes headshaping different from pottery and other material-culture items as a potentially diagnostic signifier of cultural processes, ways of life, and particular discourses of identity and belonging: headshaping is inherently inalienable from the person. Pottery can be exchanged, gifted, emulated. Pottery can spread in a relatively short time span, and new pottery styles can be appropriated from neighboring populations literally overnight, if there is a will (though such whims may not be sanctioned socioculturally). Headshaping, conversely, cannot be appropriated that easily, and it cannot be separated from the people themselves. Even if someone were willing to adopt the practice of headshaping overnight (highly unlikely given the traditional and conservative character of childcare practices), and the sociocultural environment were sufficiently permissive to allow this, it would still take a lifetime for individuals with modified heads to reach adulthood as full participants in the socioeconomic and political spheres. To arrive at desired adult forms of the head, long-term planning and the consistent application of modifying devices are needed. It is a slow process requiring planning on the scale of a human life span and generations.

Thus the implication is that the spread of this type of a body modification may be an indicator of the intensity of interaction between populations, far more so than pottery or other material-culture styles may be. Here we may think of Chinese footbinding (Gates 2001; Wang 2000): Western museums are full of the three-inch lotus shoes brought over by Western travelers to the region, but none took up the body modification itself in the context of exchange.

The impressive extent to which this very particular type of headshaping seems to be in use during the fifth millennium may indicate a particular sociocultural need for a permanent, irreversible, and bodily signifier of identity. Frank Hole's discussion (this volume) of the signs of emerging complexity during the fifth millennium is interesting in this context in that headshaping could have lent itself well to highly visual displays of differential identities in the kind of public structures discussed by Hole. Furthermore, the widespread evidence for circumferential headshaping during the fifth millennium indicates close enough interaction for the spread of a practice that requires particular forms of knowledge and investment of time and involves often highly traditional infant-care practices. It is tempting to suggest that the adoption of headshaping in new areas indicates an interaction of the closest kind: intermarriage.

oi.uchicago.edu

While headshaping has been used to denote high status in various cultural contexts (Dingwall 1931; Tiesler Blos 1998; Lorentz 2008c, 2008d), it need not be the elite that "launches" headshaping. It can simply be instigated and maintained by women marrying into communities. Headshaping lends itself to ceremonial (and ritual) use due to its high visibility and may thus have been adopted through emulation. However, the most plausible agents of transmission are women (as mothers, caretakers): headshaping is a technique that needs to be mastered. It needs to be instigated at the right window of opportunity and maintained consistently during the early period of growth of the infant (Ripley et al.1994; Van Vlimmeren et al. 2006). Circumferential headshaping in particular, in the rather extreme form that it occurs in at Ubaid and Ubaid-related sites, requires, if not a specialist to instigate it, at least highly specialized knowledge. This can only be transmitted through close initiation — not to call it intergenerational apprenticeship — to the techniques and timings required. Due to the rather lengthy time period during which headshaping bandages need to be adjusted (to take into account the growth of the braincase), it is conceivable that head binding was learned through observation and practice within a family or kinship unit, passed from one generation to the next. Parallel transmission processes are attested in the contemporary ethnographic material (Lorentz et al. in prep.). In some cases this transmission may have involved new family or kinship units.

Secure evidence for the movement of people in the past can only be gained through isotopic analysis of human skeletal remains, using, for example, Strontium isotopes to investigate patterns of residential mobility (Schweissing and Grupe 2000). This further highlights the importance of human skeletal remains in answering some of the central issues relating to the debates of Ubaid expansion versus integration.

The characteristics of headshaping — mainly its visibility, permanence, and inalienability from the person — may have provided the bases for its use as a visual marker of difference in various realms, ranging from trade, ceremonial and ritual events, encounters between mobile and settled groups, and so forth, and thus encouraged its wider adoption within a kinship unit and its propagation generation after generation. The idea of the body as malleable, as open to permanent alteration, should not be assumed as existing a priori. Arriving at such an idea is likely to have had profound consequences in cognizing the human body. The body becomes a project: in order to possess an adult body that conforms to the cultural ideals at a particular context, the infant body must be manipulated consistently during the first few years of life (Lorentz 2002, 2003b, 2008a).

In order to fully understand the phenomenon, a large-scale investigation of skeletal series, complete with detailed contextual data, radiocarbon dates, and DNA analyses where possible, is required. In the meantime, a look at some of the ethnographic and archaeological cases where headshaping is employed in somewhat better-understood cultural contexts may aid us in recognizing some of the complex uses for headshaping in the sociopolitical realm.

HEADSHAPING AND SOCIOCULTURAL GROUP MEMBERSHIP

In the following section, I argue that headshaping can and has been used for denoting sociocultural group membership, sometimes in connection to status and gender, thus forming gendered "physical capital" (see Lorentz 2008c). Firstly, headshaping as a body modification has several important characteristics that make it ideal for marking sociocultural group affiliation. Secondly, there are ethnographic and archaeological examples of headshaping practices related to denoting sociocultural group affiliation, or even "ethnicity." Headshaping is

1. bodily
    a. many societies take bodily symbols as the starting point for signifying sociocultural group membership, whether these are items worn on the body or actual manipulations of the body itself, permanent or reversible
2. highly visual
    a. headshaping can be seen from a distance, unlike some other less visible markers of sociocultural difference
    b. it can be further accentuated by hairstyles and/or head gear
    c. such highly visual bodily markers can be seen as especially important among transhumant or otherwise mobile populations with relatively few material-culture items

oi.uchicago.edu

3. permanent
    a. once established in infancy, it cannot be reversed
4. by choice
    a. of parents/caretakers, lodged in society
    b. sociocultural/communal rather than individual choice: the individual modified did not have a choice concerning his/her modification, but will be able to go on to perpetuate the practice

Ethnographic examples of group-specific headshaping include the South American Indian practice where population groups engage in discourse of difference through headshaping, each group shaping the head using a headshaping type particular to their group (Tiesler Blos 1998; Torres-Rouff 2002). There are even cases where populations have related the particular shapes resulting from head modification to the different shapes of their respective ritual mountains.

The prevalence of headshaping was universal or near universal within the Yuruk communities, nomadic populations living within the confines of the modern state of Turkey (Inalcik 1998; Özbayrı 1972). The definition of "Yuruk" does not depend on ethnic or genetic homogeneity, but denotes a nomadic lifestyle — this homogeneity in cultural practice and life ways combined with ethnic and genetic heterogeneity is of particular interest when considering the models put forward to explain the widespread Ubaid material culture, in particular the models put forward viewing communities as "buying into" specific features of cultural everyday practices that seem to define the Ubaid phenomenon.

Yuruk headshaping involves an artificially flattened back of the head with an extra protrusion at the inion, called the "yurukluk" by the Yuruk themselves (Gungor 1941). This protrusion at the inion is the result of corresponding restriction on the occipital squama below the inion due to the headshaping bandage applied after birth. The term used by the Yuruk for this protrusion is particularly interesting as it means both the "state of being Yuruk," as well as the protrusion induced by intentional headshaping. Thus in this case the physical changes caused by headshaping are directly tied to sociocultural group affiliation.

But does this kind of headshaping, relating to sociocultural group membership, or even ethnicity, occur in the archaeological record? A particularly relevant archaeological study comes from coastal Peru. A number of headshaping types can be observed among the Chiribaya populations. Lozada Cerna and Buikstra (2002) analyzed headshaping types in relation to contextual evidence from cemeteries and demonstrated that headshaping served as a symbol of corporate membership within economically specialized groups. The circumferential-type headshaping, for example, is closely associated with particular coastal sites sharing exploitation and consumption of marine resources, as well as a unique ceramic style uncommon in other contexts. The anterior-posterior headshaping type is associated with sites that show dependence on terrestrial rather than marine resources and are associated with a different type of ceramics. Further examples from the region corroborate these results.

These different case studies illustrate the use of headshaping and its particular types in demarcating particular identities and differentiating among peoples. The Yuruk case, although recent in time, is interesting in that it draws attention to the complex relations between genetic relatedness, ethnicity, lifestyle, perceptions of sociocultural group affiliation, and physical markers of difference. It may be that we need new, more complex models of sociocultural groups and the ways in which material culture, and bodies in particular, have been used in denoting difference and similarity, in order to understand the Ubaid phenomenon.

The crux is this: what made circumferential headshaping attractive over such a wide area in the fifth millennium? Unlike pottery, circumferential headshaping does not have a practical function. It is inconsequential as to brain function, nor does it seem to have provided any other functional advantage. (See Lorentz 2008c, contra Schwartz 1974, on the alleged functional advantages of post-bregmatic headshaping in carrying items on the head. Molleson and Campbell [1995: 50] also posit that the type of headshaping in use at Tell Arpachiyah would not allow carrying loads on the head.) All documented cases of headshaping in the ethnographic record point to differentiating among people as the motivation, whether the differentiation is in terms of gender, status, sociocultural group affiliation, or aesthetics.

Headshaping lends itself to signification of differential secular and/or non-secular roles, especially in ceremonial and social contexts with emphasis on visual insignia. The expanding use of circumferential headshaping in connection to the Ubaid phenomenon may be related to emerging social complexity and the need to differentiate

oi.uchicago.edu

among people, creating a niche for such a highly visual bodily marker. Rothman defines complexity as describing "a process during which a social transformation occurs to a qualitatively and quantitatively different kind of economic, governmental and religious interdependence among people living in close contact in a multisite society" (2004: 76). He points to functional "segregation" and "centralization" of the members of these societies at the heart of this interdependence, defining functional segregation as "the amount of differentiation and specialization" of the members. Thus social complexity is viewed as inherently related to differentiation. Visual markers of difference are often developed and employed in contexts of increasing social complexity.

Pollock outlines the debate on the nature of Ubaid societies (1999: 14). Some scholars argue that Ubaid societies were essentially egalitarian, each household producing most of what it needed, and most people, if not all, engaged with the task of subsistence production. According to these scholars, temples and associated officials held little authority outside the realm of religious rituals and had only few or no economic privileges. Other scholars advocate the view that the remains of Ubaid societies, at least in some regions, can be interpreted in terms of economic and social hierarchies. Within this view, religion is seen as an ideology that legitimated the emerging differentiation of people "based upon the ability of some to commandeer the labor and products of others" (Pollock 1999: 14). This view sees the temples acting as a safety net against crop failure and famine, collecting and storing surplus grain (ibid., p. 14).

On the one hand, if we accept the latter view of emerging differentiation and its legitimization through institutional means, and therefore the existence of differentiated groups of society, the use of differential circumferential headshaping during the Ubaid can perhaps be seen as an attempt to perpetuate social difference through the use of a permanent visual marker of difference. On the other hand, if we accept the view that Ubaid societies were essentially egalitarian, we need to find another way of interpreting the record of Ubaid headshaping. One possible interpretation would be the use of headshaping as a group marker. Kujit's discussion (2000) of an alternative to treating egalitarianism as a distinct category, opposed to hierarchies, is interesting in this context. Kujit and others (Boehm 1993; Feinman 1995; McKinnon 1991; Plog 1995) approach the concept "egalitarianism" as a form of ideology, "a crafted social identity or worldview that is expressed through material culture, carefully maintained by community leaders so as to deliberately affect community behaviour and social relations by emphasizing the shared identity and affinity between individuals" (Kujit 2000: 141). Headshaping can and has been used to emphasize shared identity and affinity among individuals, for example, in the case of the Yuruk (headshaping as a signifier of membership of a group heterogeneous in genetics and ethnicity, but homogenous in cultural practices and lifeways), and the Chiribaya (headshaping as a symbol of corporate membership within economically specialized groups).

Headshaping is ideal for signifying ascribed difference, in that it has to be instigated in infancy, by others, and cannot be brought about by the agent him/herself, thus preventing its use as a signifier of achieved status. In societies where the social role a child is to take in adulthood is known and ascribed in infancy, headshaping can be used to endorse this role or status. As a marker of social difference, headshaping is permanent and irreversible, as well as highly visible. For example, headshaping could have played a role in differentiating between people of different statuses, destined since infancy for their respective positions (differentiating among people within the same settlements or settlement clusters), but it could have also been used to signify cultural differences (differentiating among people adhering to a particular cultural sphere, and others), or differences in group membership within a society (such as belonging to a certain group of specialists, ritual or other).

To resolve the question of what role headshaping played in the Ubaid societies, we need not only to increase significantly the amount and resolution of skeletal and contextual data on headshaping in the region, but also to gain a better understanding of the nature of Ubaid societies and to develop more complex understandings of equality and hierarchy.

CONCLUSIONS

Examination of the current evidence for circumferential headshaping in the fifth millennium B.C. Near East, as well as the preceding and succeeding periods, suggests that

1. circumferential headshaping is most widespread during the fifth millennium B.C., coinciding with the Ubaid phenomenon

oi.uchicago.edu

2. circumferential headshaping may have been used as a marker of sociocultural group affiliation at Ubaid and Ubaid-related sites
3. the earliest evidence for the particular types of circumferential headshaping in use in Ubaid contexts later on comes from the area of Iran and dates to the eighth to seventh millennia B.C.

These conclusions must remain very tentative until we can increase the number of sites with accessible data. Detailed studies of skeletal remains are few and far between in the region, and this, together with the fact that in many cases headshaping must have been overlooked, compounds the problem. It can only be hoped that more detailed studies are conducted with awareness of the problems related to detecting and describing headshaping, including attention to headshaping types and extent. However, headshaping can and has been used for sociocultural group differentiation, and sometimes even for differentiation in terms of what we today call ethnicity, both in ethnographic and archaeological contexts. The possible gender-differential headshaping at Tepe Abdul Hosein, including two headshaping types, one of them circumferential, is rather different from the more prevalent Ubaid-related circumferential headshaping. Clearly, homogeneity of form does not preclude heterogeneity in meanings and use, especially in the longue durée — circumferential headshaping seems to have played a part in complex negotiations (and re-negotiations) of (communal) identities, in varying sociocultural and politico-economical contexts, with transformations of use and meanings through time.

ACKNOWLEDGMENTS

I gratefully acknowledge the support, assistance, and access to human skeletal remains provided by colleagues at the Iranian Centre for Archaeological Research, the National Museum of Iran, Hacettepe University, Ankara University, and the many other institutions and individuals providing assistance during the periods of research that contributed to this paper. This research benefited from funding from the following sources, which are gratefully acknowledged: Arts and Humanities Research Fund (Newcastle University), British Institute of Archaeology in Ankara, Arts and Humanities Research Council, Leverhulme Trust, Smutts Funds (University of Cambridge), Rouse Ball (Trinity College, Cambridge), Oskar Huttunen Foundation, Dorothy Garrod Funds (Department of Archaeology, University of Cambridge).

BIBLIOGRAPHY

Agelarakis, Anagnostis P.

2004 "The Shanidar Cave Proto-Neolithic Human Condition as Reflected through Osteology and Palaeopathology." In *The Proto-Neolithic Cemetery in Shanidar Cave*, edited by R. S. Solecki, R. L. Solecki, and A. P. Agelarakis, pp. 159–84. College Station: Texas A&M University Press.

Akkermans, Peter M. M. G., and Glenn M. Schwartz

2003 *The Archaeology of Syria: From Complex Hunter-gatherers to Early Urban Societies (ca. 16,000–300 B.C.)*. Cambridge: Cambridge University Press.

Angel, J. Lawrence

1968 "Appendix: Human Remains at Karataş." In "Excavations at Karataş-Semayük in Lycia, 1967," edited by M. J. Mellink. *American Journal of Archaeology* 72: 260–63.

1970 "Appendix: Human Remains at Karataş." In "Excavations at Karataş-Semayük and Elmali, Lycia, 1969," edited by M. J. Mellink. *American Journal of Archaeology* 74: 253–59.

1972 "Appendix: Late Bronze Age Cypriotes from Bamboula: The Skeletal Remains." In *Bamboula at Kourion*, edited by J. L. Benson. Philadelphia: University of Pennsylvania Press.

1976 "Appendix: Early Bronze Karataş People and Their Cemeteries." In "Excavations in the Elmalı Area, Lycia, 1975," edited by M. J. Mellink. *American Journal of Archaeology* 80: 385–91.

oi.uchicago.edu

Anton, S. C.
1989 "Intentional Vault Deformation and Induced Changes of the Cranial Base and Face." *American Journal of Physical Anthropology* 79: 253–67.

Arensburg, B., and I. Hershkovitz
1988 "Cranial Deformation and Trephination in the Middle East." *Bulletins et Mémoires de la Société d'Anthropologie de Paris* 5: 139–50.

Boehm, C.
1993 "Egalitarian Behaviour and Reverse Dominance Hierarchy." *Current Anthropology* 34: 227–54.

Bourdieu, Pierre
1977 *Outline of a Theory of Practice*. Cambridge Studies in Social Anthropology 16. Cambridge: Cambridge University Press.

Charles, Robert-P.
1965a "Note sur les restes humains de Pendayia." In *Nouveaux documents pour l'étude du bronze récent à Chypre: Recueil critique et commenté*, edited by V. Karageorghis, pp. 65–70. Études chypriotes 3. Paris: de Boccard.
1965b "Études des crânes d' Akhera." In *Nouveaux documents pour l'étude du bronze récent à Chypre: Recueil critique et commenté*, edited by V. Karageorghis, pp. 139–49. Études chypriotes 3. Paris: de Boccard.

Chippaux, Claude
1961 "Mutilations et déformations ethniques dans les races humaines." *Histoire de la médecine* 11: 7–48.

Coon, C. S.
1949 "The Eridu Crania: A Preliminary Report." *Sumer* 5: 103–06.

Cotlow, Lewis
1966 *In Search of the Primitive*. Boston: Little, Brown.

Daems, Aurelie, and Karina Croucher
2007 "Artificial Cranial Modification in Prehistoric Iran: Evidence from Crania and Figurines." *Iranica Antiqua* 42: 1–21.

Davidson, Thomas E., and Trevor Watkins
1981 "Two Seasons of Excavation at Tell Aqab in the Jezirah, N.E. Syria." *Iraq* 43: 1–18.

Dingwall, Eric John
1931 *Artificial Cranial Deformation: A Contribution to the Study of Ethnic Mutilations*. London: Bale.

Downs, D.
1984 "The Human Skeletal Remains." *Sumer* 43: 127.

Egami, Namio, editor
1958 *Telul eth Thalathat* 1: *The Excavation of Tell II: The First and Second Season (1956–1957)*. Tokyo University Iraq-Iran Archaeological Expedition, Report 1. Tokyo: Institute of Oriental Culture, University of Tokyo.

Feinman, Gary M.
1995 "The Emergence of Inequality: A Focus on Strategies and Processes." In *Foundations of Social Inequality*, edited by T. D. Price and G. M. Feinman, pp. 255–79. Fundamental Issues in Archaeology. New York: Plenum.

Ferembach, D.
1970 "Étude anthropologique des ossements humains néolithique de Tell-Ramad, Syrie." *L'Anthropologie* 74: 244–75.

Fisher, G., and D. DiPaolo Loren
2003 "Embodying Identity in Archaeology." *Cambridge Archaeological Journal* 13: 225–30.

Fürst, Carl Magnus
1933 *Zur Kenntnis der Anthropologie der Prähistorischen Bevölkerung der Insel Cypern*. Lund: H. Ohlssons.

oi.uchicago.edu

Gates, H.
2001 "Footloose in Fujian: Economic Correlates of Footbinding." *Comparative Studies of Society and History* 2001: 130–48.

Gerszten, P. C., and E. Gerszten
1995 "Intentional Cranial Deformation: A Disappearing Form of Self-Mutilation." *Neurosurgery* 37: 374–82.

Gungor, K.
1941 *Cenubi Anadolu Yuruklerinin Ethno-Antropolojik Tetkiki*. Ankara: DTCF Yayinlari.

Haerinck, E., and B. Overlaet
1996 *The Chalcolithic Period, Parchinah and Hakalan*. Luristan Excavation Documents 1. Brussels: Royal Museums of Art and History.

Hasluck, M.
1947 "Head-deformation in the Near East." *Man* 47: 143–44.

Hodder, Ian
1982 *Symbols in Action: Ethnoarchaeological Studies of Material Culture*. New Studies in Archaeology. Cambridge: Cambridge University Press.

Hole, Frank
1977 *Studies in the Archaeological History of the Deh Luran Plain: The Excavation of Chaga Sefid*. Memoirs of the Museum of Anthropology 9. Ann Arbor: University of Michigan.

Hole, Frank, editor
1987 *The Archaeology of Western Iran: Settlement and Society from Prehistory to the Islamic Conquest*. Smithsonian Series in Archaeological Inquiry. Washington, D.C.: Smithsonian Institution Press.

Imbelloni, J.
1938 "Formas, esencia y metódica de las deformaciones cefálicas intencionales." *Revista del Instituto de Antropología de la Universidad de Tucuman* 1: 5–37.

Inalcik, H.
1998 "The Yuruks: Their Origins, Expansions and Economic Role." *Octs* 1998: 39–65.

Jasim, Sabah A.
1985 *The 'Ubaid Period in Iraq: Recent Excavations in the Hamrin Region*. British Archaeological Reports, International Series 267. Oxford: British Archaeological Reports.

Kiszely, István
1978 *The Origins of Artificial Cranial Formation in Eurasia from the Sixth Millennium B.C. to the Seventh Century A.D*. British Archaeological Reports, International Series (supplementary) 50. Oxford: British Archaeological Reports.

Koizumi, T.
1993 "The Ubaid Pottery from Kashkashok II: Typology and Chronology." *Al-Rāfidān* 14: 19–67.

Kujit, Ian
2000 "Keeping the Peace: Ritual, Skull Caching, and Community Integration in the Levantine Neolithic." In *Life in Neolithic Farming Communities: Social Organisation, Identity and Differentiation*, edited by I. Kujit, pp. 137–64. London: Kluwer Academic/Plenum.

Kurth, G.
1980 "Beiträge zur Anthropologie und Populationsbiologie des Nahen Osten aus der Zeit von Mesolithikum bis zum Chalkolithikum. Ein exemplarischer Versuch anhand der Serien vom Tell es Sultan in Jericho, Khirokitia/Cypern, Byblos/Libanon, Eridu/Irak und Sialk/Iran." *Bonner Hefte zur Vorgeschichte* 21: 31–203.

Kurth, G., and O. Rohrer-Ertl
1981 "Appendix B: On the Anthropology of the Mesolithic to Chalcolithic Human Remains from the Tell Es-Sultan in Jericho, Jordan." In *Excavations at Jericho: The Architecture and Stratigraphy of the Tell*, by K. M. Kenyon, pp. 407–99. London: British School of Archaeology in Jerusalem.

oi.uchicago.edu

Lambert, P. J.

1979 "Early Neolithic Cranial Deformation at Ganj Dareh Tepe, Iran." *Canadian Review of Physical Anthropology* 1: 51–54.

Lorentz, Kirsi O.

1998 Infant Archaeology: Activities and Attitudes Related to Children in Cyprus from the Aceramic Neolithic to the Late Bronze Age. M.A. thesis, University of Edinburgh.

2002 "Cultures of Physical Modifications." In *Symposium on Mediterranean Archaeology (SOMA) 2001, University of Liverpool*, edited by G. Muskett, A. Koltsida, and M. Georgiadis, pp. 203–10. British Archaeological Reports, International Series 1040. Oxford: British Archaeological Reports.

2003a Minding the Body: The Growing Body in Cyprus from the Aceramic Neolithic to the Late Bronze Age. Ph.D. dissertation, University of Cambridge.

2003b "Cultures of Physical Modifications: Child Bodies in Ancient Cyprus." *Stanford Journal of Archaeology* 2: 1–17.

2004 "Age and Gender in Eastern Mediterranean Prehistory: Depictions, Burials and Skeletal Evidence." *Ethnographisch-Archaologische Zeitschrift* 45: 297–315.

2005 "Late Bronze Age Burial Practices: Age as a Form of Social Difference." In *Cyprus: Religion and Society from the Late Bronze Age to the End of the Archaic Period*, edited by V. Karageorghis, H. Matthäus, and S. Rogge, pp. 41–55. Möhnesee: Bibliopolis.

2006 "Headshaping at Marki and Its Socio-cultural Significance." In *Marki Alonia: An Early and Middle Bronze Age Settlement in Cyprus; Excavations 1995–2000*, edited by D. Frankel and J. Webb, pp. 297–303. Jonsered: Paul Åströms Förlag.

2008a "Crafting the Head: The Human Body as Art?" In *Proceedings of the Fifth International Congress on the Archaeology of the Ancient Near East*, edited by J. M. Córdoba, M. Molist, M. Carmen Pérez, I. Rubio, and S. Martinez. Madrid: Universidad Autónoma de Madrid.

2008b "From Bodies to Bones and Back: Theory and Human Bioarchaeology." In *Between Biology and Culture*, edited by H. Schutkowski. Cambridge: Cambridge University Press.

2008c "From Life Course to Longue Durée: Headshaping as Gendered Capital?" In *Gender through Time in the Ancient Near East*, edited by D. Bolger. Walnut Creek: AltaMira Press.

2008d "The Malleable Body: Headshaping in Greece and the Surrounding Regions." In *New Directions in the Skeletal Biology of Greece*, edited by S. C. Fox, C. Bourbou, and L. Schepartz. Occasional Wiener Laboratory Series. Athens: Wiener Laboratory, The American School of Classical Studies in Athens.

In prep. Evidence for Headshaping (Cultural Cranial Modification) at Tepe Abdul Hosein, Iran.

Lorentz, Kirsi O. et al.

In prep. "Contemporary Headshaping Practices: Evidence from Turkey."

Lortet, Louis

1884 "Cause des déformations que présentent les crânes des Syro-Pheniciens." *Bulletin de la Société d'Anthropologie de Lyon* 3: 30–40.

Lozada Cerna, M. C., and J. E. Buikstra

2002 "Pescadores and Labradores Among the Señorío of Chiribayia in Southern Peru." Paper given at Stanford Body Conference in February 2002.

Lynnerup, N.; H. Hjalgrim; L. R. Nielsen; H. Gregersen; and Ingolf Thuesen

1997 "Non-invasive Archaeology of Skeletal Material by CT Scanning and Three-dimensional Reconstruction." *International Journal of Osteoarchaeology* 7: 91–94.

Mallowan, M. E. L.

1969 "Rediscovered Skulls from Arpachiyah." *Iraq* 31: 49–58.

Mallowan, M. E. L., and J. Cruikshank Rose

1935 "Excavations at Tall Arpachiyah, 1933." *Iraq* 2: 1–178.

Marcus, M.

1993 "Incorporating the Body: Adornment, Gender, and Social Identity in Ancient Iran." *Cambridge Archaeological Journal* 39: 157–78.

oi.uchicago.edu

Matsutani, Toshio, editor
1991 *Tell Kashkashok: The Excavations at Tell No. II*. Tokyo: University of Tokyo Press.

McKinnon, Susan
1991 *From a Shattered Sun: Hierarchy, Gender and Alliance in the Tanimbar Islands*. Madison: University of Wisconsin Press.

Meiklejohn, C.; Anagnostis P. Agelarakis; P. A. Akkermans; P. E. L. Smith; and R. Solecki
1992 "Artificial Cranial Deformation in the Proto-Neolithic and Neolithic Near East and Its Possible Origin: Evidence from Four Sites." *Paléorient* 18: 83–97.

Molleson, T., and Stuart Campbell
1995 "Deformed Skulls at Tell Arpachiyah: The Social Context." In *The Archaeology of Death in the Ancient Near East*, edited by S. Campbell and A. Green, pp. 45–55. Oxbow Monograph 51. Oxford: Oxbow Books.

Nishiaki, Yoshihiro, and Toshio Matsutani, editors
2001 Tell Kosak Shamali: The Archaeological Investigations on the Upper Euphrates, Syria 1: *Chalcolithic Architecture and the Earlier Prehistoric Remains*. University Museum, the University of Tokyo Monograph 1. Tokyo: The University Museum, University of Tokyo; Oxford: Oxbow Books.
2003 Tell Kosak Shamali: The Archaeological Investigations on the Upper Euphrates, Syria 2: *Chalcolithic Technology and Subsistence*. University Museum, the University of Tokyo Monograph 2. Tokyo: The University Museum, University of Tokyo; Oxford: Oxbow Books.

Ortner, J.
1996 "Artificial Cranial Deformation of a Human Skull from Choga Mish." In Choga Mish 1: *The First Five Seasons of Excavations: 1961–1971*. Part 1: Text, edited by P. Delougaz, H. J. Kantor, and A. Alizadeh, pp. 319–22. Oriental Institute Publications 101. Chicago: The Oriental Institute.

Özbayrı, K.
1972 *Tahtacılar ve Yörükler*. Paris: Institut Français d'Archéologie d'Istanbul.

Özbek, M.
1974 "Étude de la déformation crânienne artificielle chez les chalcolithiques de Byblos (Liban)." *Bulletins et Mémoires de la Société d'Anthropologie de Paris* 1: 455–81.
2001 "Cranial Deformation in a Subadult Sample from Değirmentepe (Chalcolithic, Turkey)." *American Journal of Physical Anthropology* 115: 238–44.

Pardini, E.
1968 "Il Sistan e un area di deformazione crania?" *Quaderni di Scienze Antropologiche* 1: 188–94.

Peltenburg, E.; P. Croft; A. Jackson; C. McCartney; and M. A. Murray
2001 "Well-established Colonists: Mylouthkia 1 and the Cypro-pre-pottery Neolithic B." In *The Earliest Prehistory of Cyprus: From Colonization to Exploitation*, edited by S. Swiny, pp. 61–94. Cyprus American Archaeological Research Institute Monograph Series 2. Boston: American Schools of Oriental Research.

Plog, S.
1995 "Equality and Hierarchy: Holistic Approaches to Understanding Social Dynamics in the Pueblo Southwest." In *Foundations of Social Inequality*, edited by T. D. Price and G. M. Feinman, pp. 189–206. New York: Plenum.

Pollock, Susan
1999 *Ancient Mesopotamia: The Eden that Never Was*. Cambridge: Cambridge University Press.

Prendergast, S.
2000 "'To Become Dizzy in Our Turning': Girls, Body-maps and Gender as Childhood Ends." In *The Body, Childhood and Society*, edited by A. Prout. London: Macmillan.

Pullar, J.
1990 *Tepe Abdul Hosein: A Neolithic Site in Western Iran; Excavations 1978*. British Archaeological Reports, International Series 563. Oxford: British Archaeological Reports.

oi.uchicago.edu

Ripley, C. E.; J. Pomatto; S. P. Beals; E. F. Joganic; K. H. Manwaring; and S. D. Moss
1994 "Treatment of Positional Plagiocephaly with Dynamic Orthotic Cranioplasty." *Journal of Craniofacial Surgery* 5: 150–59.

Risdon, D. L.
1939 "A Study of the Cranial and Other Human Remains from Palestine Excavated at Tell Duweir (Lachish) by the Wellcome Marston Archaeological Research Expedition." *Biometrika* 31: 99–166.

Rothman, Mitchell S.
2004 "Studying the Development of Complex Society: Mesopotamia in the Late Fifth and Fourth Millennia B.C." *Journal of Archaeological Research* 12: 75–119.

Schulte-Campbell, C.
1983 "A Late Bronze Age Cypriot from Hala Sultan Tekke and Another Discussion of Artificial Cranial Deformation." Appendix 5 in *Hala Sultan Tekke*, Vol. 8: *Excavations 1971–79*, edited by P. Åströms et al., pp. 249–52. Studies in Mediterranean Archaeology 45. Göteborg: Paul Åströms.

Schwartz, Jeffrey H.
1974 "The Human Remains from Kition and Hala Sultan Tekke: A Cultural Interpretation." In *Excavations at Kition* 1: *The Tombs*, edited by V. Karageorghis, pp. 151–62. Nicosia: Department of Antiquities.
1995 *Skeleton Keys: An Introduction to Human Skeletal Morphology, Development, and Analysis*. Oxford: Oxford University Press.

Schweissing, M. M., and G. Grupe
2000 "Local or Non-local? A Research of Strontium Isotope Ratios of Teeth and Bones on Skeletal Remains with Artificially Deformed Skulls." *Anthropologische Anzeiger* 58: 99–103.

Şenyürek, M. S., and S. Tunakan
1951 "Seyh Hüyük İskeletleri." *Belleten* 60: 431–45.

Shilling, Chris
1993 *The Body and Social Theory*. London: Sage.

Sofaer, Joanna R.
2006 *The Body as Material Culture: A Theoretical Osteoarchaeology*. Topics in Contemporary Archaeology. Cambridge: Cambridge University Press.

Solecki, Ralph S.; Rose L. Solecki; and Anagnostis P. Agelarakis
2004 *The Proto-Neolithic Cemetery in Shanidar Cave*. Anthropology Series 7. College Station: Texas A&M University Press.

Sorensen, M. L. S.
1991 "Gender Construction through Appearance." In *The Archaeology of Gender: Proceedings of the 22nd Annual Conference of the Archaeological Association of the University of Calgary*, edited by D. Walde and N. D. Willows, pp. 121–29. Calgary: Archaeological Association of the University of Calgary.

Soto-Heim, P.
1986 "Déformation crânienne artificielle dans l' Iran ancien." *Bulletins et Mémoires de la Société d'Anthropologie de Paris* 14: 105–16.

Tiesler Blos, V.
1998 *La costumbre de la deformación cefálica entre los antiguos mayas: Aspectos morfológicos y culturales.* Mexico City: Instituto Nacional de Antropología e Historia.

Torres-Rouff, C.
2002 "Cranial Vault Modification and Ethnicity in Middle Horizon San Pedro de Atacama, Chile." *Current Anthropology* 43: 163–71.

Treherne, P.
1995 "The Warrior's Beauty: The Masculine Body and Self-identity in Bronze Age Europe." *Journal of European Archaeology* 3: 105–44.

oi.uchicago.edu

Trinkaus, Erik
1982 "Artificial Cranial Deformation in the Shanidar 1 and 5 Neandertals." *Current Anthropology* 23: 198–200.

Vallois, H. V.
1937 "Note sur les ossements humains de la nécropole néolithique de Byblos." *Bulletin Muséum Beirouth* 1: 23–33.

Vallois, H. D., and D. Ferembach
1962 "Les restes humains de Ras Shamra et de Minet el Beida: Étude anthropologique." *Ugaritica* 4: 565–630.

Van Vlimmeren, L. A.; P. J. M. Helders; L. N. A. Van Adrichem; and R. H. H. Engelbert
2006 "Torticollis and Plagiocephaly in Infancy: Therapeutic Strategies." *Pediatric Rehabilitation* 9: 40–46.

Wang, Ping
2000 *Aching for Beauty: Footbinding in China*. Minneapolis: University of Minnesota Press.

White, C. D.
1996 "Sutural Effects of Fronto-occipital Cranial Modification." *American Journal of Physical Anthropology* 100: 397–410.

oi.uchicago.edu

10

A SNAKE IN THE GRASS: REASSESSING THE EVER-INTRIGUING OPHIDIAN FIGURINES

AURELIE DAEMS, *Ghent University, Belgium*

INTRODUCTION

When Henry Hall and Leonard Woolley discovered the first Ubaid-period figurines in the 1920s, little did they know that the "drab pottery figure of a man" (fig. 10.1a) they found at Eridu (Hall 1923: 192) and their "primitive bird-like feminine figurine" (fig. 10.1b) from al-'Ubaid (Hall and Woolley 1927: 153) could still be of any significance today. Nearly a century has passed since these fragments were recovered from the southern Mesopotamian soil, yet despite the additional discovery of many similar fragments from nearby sites, information on the possible meaning, function, and use of these so-called ophidian figurines is still largely missing.

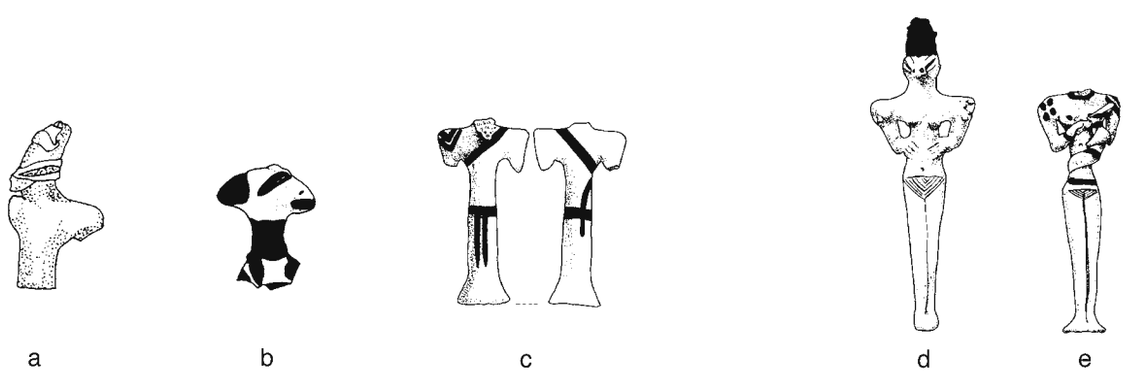


Figure 10.1. Early finds from (*a*) Eridu (after Hall 1923: fig. 2: center, pl. 37); (*b*) al-'Ubaid (after Hall and Woolley 1927: fig. 3); and (*c*) stylized figurine from Uruk (after Jordan 1932: T. 21: 23); and (*d*) type-examples from Ur (after Woolley 1955: pl. 20:1) and (*e*) after Woolley 1955: pl. 20:7)

The Durham Conference has been the perfect opportunity to revisit some issues concerning these figurines and to see if the additional material assembled over the years could shed new light on old problems. I first briefly discuss occurrence and morphology, since these figurines differ greatly from earlier and later figurine types fashioned throughout the Near East. Then I outline and discuss the term "ophidian" used in relation to a large number of realistic southern Ubaid figurines, the best-known examples being the ones from the graves of Ur (e.g., fig. 10.1d). Attention is then directed toward the sites and the archaeological contexts in which these figurines were found, an approach that has so far not been adopted in the literature concerned with these objects. This is followed by a short introduction of figurines from central and northern Mesopotamia and from western and southern Iran. Finally, the presented data are reassessed, and some tentative conclusions are drawn at the end of this paper.

oi.uchicago.edu

SETTING THE SCENE: SOME INTRODUCTORY FACTS ON SOUTHERN UBAID FIGURINES

Ubaid figurines are restricted to the south of Mesopotamia (fig. 10.2). They have been found at the sites of Eridu, al-'Ubaid, Tell el-'Oueili, Tello, Ur, Uruk, Rejibeh X, Hajji Muhammad, Nippur, and somewhat farther north at Tell Uqair. Realistic as well as stylized; female, male, and sexless; and painted as well as plain figurines are known. These occur together in nearly all the sites just mentioned. Whereas the stylized southern Ubaid figurines stand between 5 and 10 cm in height when complete, the realistic figurines always average around 15 cm. The latter figurines are made from a central clay stalk upon which additional bodily features were applied, pinched, carved, or painted (McAdam 2003: 183). Within these realistically modeled figurines, which are the main focus of this contribution, the female sex largely dominates the sample. Of the 121 realistically modeled southern Ubaid figurines published so far,[1] the gender proportion is approximately distributed as follows: 79 percent are female figurines, 4 percent are male figurines, and 17 percent are sexless figurines (Daems 2005: 1042). That sexless figurines make up nearly one-fifth of the sample is partly due to the fact that their initial applied or incised sex could no longer be reconstructed. It had either fallen off or was too damaged to allow sexing by analogy with more complete figurines. Next to the realistic figurines, stylized and generally sexless figurines with a tubular body also occur (fig. 10.1c). Although these are not focused on here (for a more in-depth discussion, see Daems 2005, 2007), the proportion of portrayed gender is somewhat different from the realistic ones. Of the twenty-six stylized Ubaid figurines published so far, it is the sexless examples that dominate the sample. These constitute 92 percent of the published data, while male and female figurines are each represented by a meager 4 percent (Daems 2005: 1046).

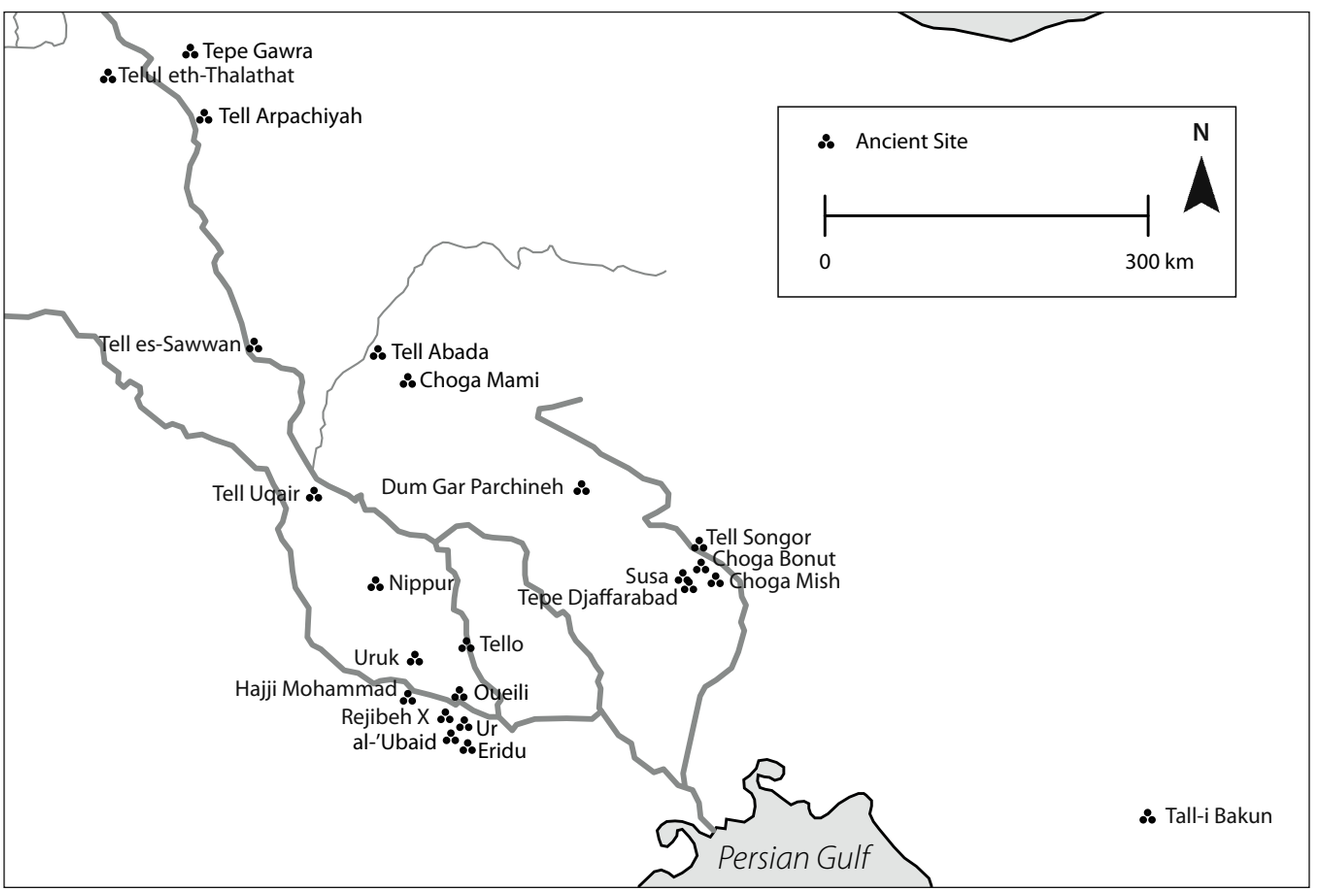


Figure 10.2. Map of relevant sites

[1] The reader should nevertheless be aware that for certain sites, such as Uruk and Nippur, the sample contains more figurines than have been published. The percentages and numbers presented here are thus indications of gender prevalence instead of gender realities.

oi.uchicago.edu

MORPHOLOGY OF SOUTHERN UBAID FIGURINES AND THE PROBLEM OF THE DESIGNATION "OPHIDIAN"

Whereas the majority of figurines from earlier and contemporary northern and central Mesopotamian sites display seated and plump women, southern Ubaid figurines invariably display a very slender, fine, and elongated physique seemingly reminiscent of youth, health, and perhaps physical strength, be they male or female (fig. 10.1d). All figurines adopt similar androgynous body forms and features, whether these are applied, painted, or pinched. Every figurine has an exaggerated, elongated head defined as a crown by McAdam (2003: 168, 170) and as a form of artificial cranial modification by Wengrow (1998: 792) and Moorey (2003: 19). Faces are always somewhat out of proportion, with the nose and the coffee-bean-shaped eyes being systematically overemphasized. Shoulders are sometimes rounded and sometimes angular, but they are always adorned with strokes or dots of black paint, or with applied round pellets of clay. Chests are flat and waists are tapering, no matter which sex is being portrayed. The lower part of the body is equally always the same: legs are long, fine, and indicated by means of a thin vertical incision that runs from the genital area to the feet. The latter are rendered either as a rounded base or as tips that prevent the figurines from standing in an upright position without additional support (McAdam 2003: 180). It is especially this reclining position, along with the slender body form and the non-human-like facial features, that are responsible for the designation of these figurines as "ophidian" in the literature (but see below).

In the case of female figurines, there is not one bulging stomach or hanging breast. On the contrary, stomachs are completely flat, and breasts are small and protruding. Rendering the reproductive and post-reproductive stages of the female body, as seems to have been the case for some older northern Mesopotamian female figurines (Daems 2007), now seems clearly not to have been intended. Admittedly, two examples from Ur (Woolley 1955: pls. 20:5 and 20:7) represent a woman breast-feeding a baby (fig. 10.1e), but these stand for only 1.7 percent of the total sample of Ubaid female figurines. Male figurines are always portrayed with strong, angular shoulders that suggest physical power and strength of the body. If not adolescents then at least male and female southern Ubaid figurines seem to portray young adults, perhaps suggesting enhancement or idolization of youth or physical power through their morphology.

Comparing these southern Ubaid figurines with some figurines from the Samarra period in central Mesopotamia can shed light on the possible origin of this specific morphology. McAdam (2003: 176) placed some Samarra-period figurines from Tell Songor A (e.g., fig. 10.3a) next to a figurine from Eridu (fig. 10.3b) and one from Ur (fig. 10.3c) in order to demonstrate how well their morphology coincides. The same can be proposed here for some

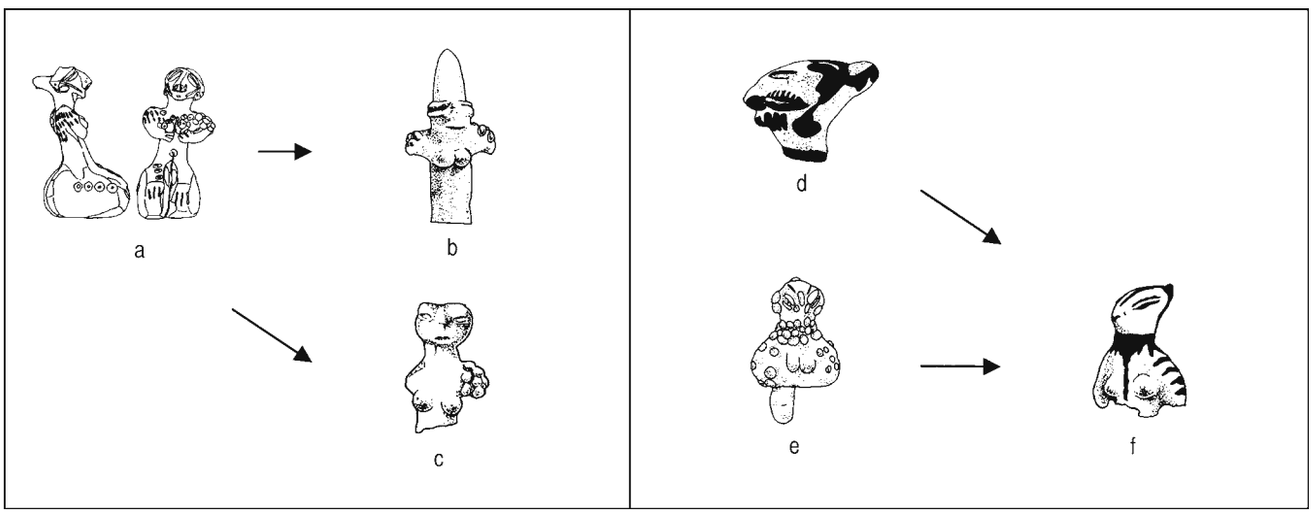


Figure 10.3. Ties between southern Ubaid (*b*, *c*, and *f*) and Samarra-period figurines from central Mesopotamia (*a*, *d*, and *e*) (*a*) Tell Songor A (after Fujii 1981: fig. 39:1); (*b*) Eridu (after Safar, Mustafa, and Lloyd 1981: fig. 116: 4); (*c*) and (*f*) Ur (after Woolley 1955: pls. 22:4, 22:3); (*d*) Choga Mami (after Oates 1969: pl. 25, fig. a–c); (*e*) Tell es-Sawwan (after Ippolitoni-Strika 1998: fig. 1a–e)

oi.uchicago.edu

figurines from the central Mesopotamian Samarra sites of Choga Mami (fig. 10.3d) and Tell es-Sawwan (fig. 10.3e) in relation to a figurine from Ur (fig. 10.3f). In both cases, clear parallels can be drawn in the way facial as well as body features are being represented. In the case of the central Mesopotamian figurines, the heads are also elongated and have applied or painted facial features. Eyes are equally shaped like coffee beans, displaying an oval form incised by a deep slit. Clay pellets or strokes of dark paint adorn the torso of each figurine, and the chest is always flat and refined. The single feature that does not correspond between the Samarra and the southern Ubaid figurines is the posture, which is respectively rendered seated and standing. For the rest, morphological features and details of the figurines match strikingly, and it is therefore not unreasonable to suggest that the origin of the Ubaidian morphology should be sought in Samarran central Mesopotamia.

In the literature the male and female Ubaid figurines are invariably designated as "ophidian" (e.g., Breniquet 2001; Collon 1995; David 1983), a term never adopted for the central Mesopotamian figurines from which they seem to derive. "Ophidian" literally means "like a snake, in the shape of a snake." It is the elongated head, pointed nose, coffee-bean eyes, and clay pellets or painted dots on the torso, at times identified as snakes' scales, that brought about the designation as ophidian for the bulk of these figurines. Their "Schlangennatur," as Neumann (1956: 108) described them, is accentuated by an extended body with square or angular shoulders and small feet mostly ending in a tip, which prevent the figurines from standing. According to Breniquet (2001: 50), the reclining position these figurines thus necessarily adopted emphasizes their snakelike or reptilian nature.

We should be careful with using such fixed definitions as "ophidian," especially where it concerns objects for which the past utility escapes us today. The term "ophidian" implies a reptilian character and hence a connection with the animal world. In it lies the danger of looking for a meaning in a domain with which they may very well never have been connected. It would be better to define them primarily in terms of the period or sub-period in which they were recovered, in this case Ubaid 0, 1, 2, 3, or 4, rather than tag them with a name that is related to a function or appearance they perhaps never were intended to have. In this respect it is necessary to remember how in the past many female and even sexless figurines were too easily connected with a mother-goddess cult and hence for no reason defined as mother-goddess and fertility figurines (e.g., Gimbutas 1974, 1991, and 2001; for an in-depth critique, see Eller 2000).

ARCHAEOLOGICAL AND SOCIAL CONTEXTS OF UBAID FIGURINES

Although the lack of well-documented archaeological contexts is a recurring problem in the analysis of human figurines, reflecting on the scanty material and contexts of the southern Ubaid sites can provide clues for use of these figurines. This is an approach that has as yet not received any attention in the literature concerned with the analysis of southern Ubaid figurines. Archaeological contexts can indeed help to get insights into social contexts of artifacts, provided the contexts were excavated, registered, described, and assessed properly and with attention to all the material found within. We should thus avoid defining the meaning of Ubaid figurines solely and primarily through morphology, as done in the past. Instead of debating what these figurines may have represented (e.g., a snake, a deity, a demon, a shaman), we can ask ourselves who produced and who used the figurines, where they were used, where they were discarded, and in which social contexts they operated. After all, as archaeologists we should be looking for the "people behind the things" (Wheeler in Balter 2004: 1). But before getting insights into the possible social contexts of these figurines, we should get insights into their archaeological contexts, and these are precisely reviewed here.

As noted above, the first fragments of Ubaid figurines were found at the sites of Eridu and al-'Ubaid. Two broken human figurines from the latter site were recovered loose in the soil of the Ubaid-period cemetery but not inside the tombs (Hall and Woolley 1927: 153, figs. 3 and 4). Additional Ubaid figurines found in southern Mesopotamia during the course of the early twentieth century are mostly surface finds. These include an Ubaid 4 figurine found on the surface of Rejibeh X, a small unexcavated mound located in the vicinity of Ur (Woolley 1955: 10, 188, pl. 21:3); an Ubaid 2/3 figurine found at the site of Hajji Muhammad (Strommenger 1963: 24, pl. 18a), and various fragmented female figurines recovered on the surface and in the brickwork of a later monument at Nippur (Van Buren 1930: 3, fig. 2, pl. 1; Gibson, pers. comm.). Other early figurine finds were unearthed in situ, but this does not mean that they abound in contextual information, as demonstrated below.

oi.uchicago.edu

Twenty-two Ubaid 4 figurines were found at the site of Tello, ancient Girsu (Barrelet 1968: pls. 1 and 8). Seven of them represent the typical realistically modeled female figurines that are known from Ur, Uruk, and Eridu. In the light of the large and more impressive historical monuments that were unearthed at Tello, the Ubaid settlement must certainly have had the least attention during the operations. On the contexts of these Tello figurines, their excavator de Genouillac (1936: 39) wrote tellingly, "il me semble inutile de décrire l'emplacement où furent trouvées toutes ces figurines," which says much about the offhand way in which these figurines were treated. Remains of an Ubaid-period settlement have been unearthed slightly farther north at the site of Tell Uqair (Lloyd and Safar 1943: 135). Here again the literature remains silent on the original findspot of the three Ubaid figurines unearthed.

The site of Uruk produced the majority of the southern Ubaid figurines, but only three of the more than 250 fragments were found more or less in context (Ziegler 1962). The greater bulk of the figurines were used along with sherds of the Hajji Muhammad and Ubaid 4 periods as tempering for large mudbricks that were used for the Anu ziggurat on the site (Jordan 1932: 28; Heinrich 1937: 27). Older Ubaid structures near the vicinity of this large monument must therefore have been exploited as a quarry during later periods. Domestic debris of all sorts, pottery, and figurines were used for shaping these bricks that measured about $50 \times 25 \times 10$ cm (Heinrich 1937: 48). Hence the initial contexts of most of the figurines from this site are lost. Other Ubaid figurine fragments from Uruk were retrieved during nearby surface surveys (Adams 1975: 12; Ziegler 1962: 19) or in the area of the Steingebäude, where Ubaid layers identified as temples or shrines were exposed (Oates 1983: 251). Additional fragments were recovered in the process of excavation of the different Ubaid strata. One is a fragmented male figurine retrieved from stratum K VII (Ziegler 1962: 11, pl. 1:3), similar to the single male figurine from Eridu (see fig. 10.4a). An additional deep sounding opened southwest of the Eanna district revealed two more figurine fragments (Wrede 2003: 97): part of a foot was found in level XVII, which was characterized by reed architecture; and part of an arm was found in level XVIII, which was characterized by mudbrick architecture. At least three fragments, therefore, come from Late Ubaid domestic layers, while all other fragments were found out of context. It follows that we are already at a serious loss if we rely solely on the southern Ubaid sites for contextual data to illuminate the meaning, function, and use of Ubaid-period figurines. The sites of Ur, Eridu, and Tell el-'Oueili, however, provide further clues.

Twenty-five figurines were discovered at the site of Ur, the majority of them were fashioned in the typical Late Ubaid tradition. Two of them (Woolley 1955: pls. 22:9 and 22:15) come from a house in pit F, dated to the Early Ubaid period. They were found along with domestic and utilitarian artifacts such as pottery, pounders, grinders, flint hoes, clay sickles, net sinkers, and spindle whorls (Woolley 1955: 12), attesting to their probable use alongside or during everyday activities. Other later Ubaid figurines from pit F were found loose in the soil (Woolley 1955: pl. 20:6), in rubbish strata mixed with Ubaid pottery of the earlier phases, along with querns, rubbing stones, clay sickles, and spindle whorls (Woolley 1955: 69). The best-known figurines come from the tombs unearthed in pit F, fashioned in the typical Late Ubaid tradition (e.g., fig. 10.1d–e). In total, forty-nine Ubaid 4 graves were unearthed at the site, six of which were accompanied by one figurine; grave PFG/T, exceptionally, had two figurines (Woolley 1955: 98).

A few facts concerning these Ubaid 4 tombs are worth mentioning here. At Ur the deceased were buried in shafts that were occasionally paved with a bed of broken pottery. The majority of the dead lay on their back in an extended position with the hands resting on the pelvis. The ceramics offered to the deceased are invariably dated to the Ubaid 4 period and accompanied all people at Ur, regardless of sex or age. These pots were almost always placed at the feet. Additionally, the burial pottery did not differ substantially from the pottery recovered inside domestic areas (Woolley 1955: 20), which suggests that these ceramics were of importance during as well as after life at Ur. The figurines that were recovered inside the graves were all female, with two of them (e.g., fig. 10.1e) representing a woman breast-feeding a baby. These, as well as the other Ubaid-period figurines found in the graves of Ur, are among the finest of the figurines fashioned in this specific tradition. Along with one male figurine found at Eridu (fig. 10.4a), they are also the only figurines found inside graves of Ubaid-period sites. Children or small infants were never buried with figurines. Apart from that, adults and children were buried with no transparent distinction in mortuary practice or accompanying burial goods.

These points all indicate that there is no clear-cut difference in the treatment of the dead that were interred with or without a figurine. The single restriction noticeable so far is that figurines were reserved for some of the adults of the Ur community, but it has never been determined to which specific age category these adults belonged: the majority of the bones were either badly decayed or disturbed due to intrusive skeletal material (Woolley 1955: 18). Certain finds concerning the Ubaid 4 skeletal material from Ur seem nevertheless partly connected to the use of some of the human figurines. The upper body of the skeleton of tomb PFG/KK, for instance, in which no figurine was found,

oi.uchicago.edu

was covered in a fine reddish hematitic powder, the same that was used to paint the face of a figurine found in tomb PFG/T, the single grave from Ur containing two figurines. This same red powder was used to cover the upper portion of one body in grave PFG/JJ, in which was found a figurine devoid of a red wash or cover on its face; whereas the second figurine in that specific tomb had a lump of red hematite close to the right ear (Woolley 1955: 98). In all three graves, the bodies were again lying on their backs in an extended position and with hands resting on the pelvis: exactly the same position the accompanying figurines in the graves of Ur had.

Excavations at the nearby site of Eridu revealed nine human figurines next to the single figurine that had already been found during surveys of the site (fig. 10.1a). Four of these (Safar, Mustafa, and Lloyd 1981: 236, fig. 116:1, 2, 5, and 9) were found loose in the soil among the graves of the Ubaid 4 cemetery (Charvat 1993: 70). One male figurine (fig. 10.4a) was discovered inside a grave. Additionally a figurine was found in the "temple" of Temple Sounding level XVI, Ubaid 1 (Safar, Mustafa, and Lloyd 1981: 236, fig. 116:8), while two other figurines were unearthed in the Hajji Muhammad (Ubaid 2) levels XIV and XII of the Temple Sounding (ibid., p. 236, fig. 116:6 and 7). Only one figurine was retrieved in an Ubaid-period house with no further indications of associated artifacts, structures, or features (ibid., p. 236, fig. 116:4). Although meager, the contexts of these Eridu figurines again suggest that southern Ubaid figurines had a use inside the settlement structures during the lives of the living, as well as after their death.

One figurine deserves our special attention (fig. 10.4a). It is the complete Ubaid figurine found inside a woman's grave. The figurine shows a person of the male sex in erect position with a high conical head or headdress; the hands are placed at the chest holding some sort of scepter, which Wengrow (1998: 792) interprets as phallic. The figurine has traces of a whitewash covering the whole of the body, save for the "crown" (McAdam 2003: 168). The woman buried with the figurine was lying on her back in an extended position and with hands near her pelvis, a position similar to the bodies found in the tombs of Ur. Of the 193 Ubaid 4 graves excavated at Eridu, however, tomb 68, in which this woman was buried, is the only one that contained a human figurine. Nevertheless, there is nothing that substantially distinguishes this tomb from the remaining tombs at the site. Nearly all the deceased found in the Eridu cemetery are again lying on their backs with their hands resting on their pelvis (Safar, Mustafa, and Lloyd 1981: 121), the same position used to inter the bodies at Ur. At Eridu their final resting place was usually a mudbrick coffin or box, but in rarer cases they were buried directly in the soil.[2] In some cases the bodies were lying on a reed mat (ibid., p. 120), but most lay directly on the soil. The deceased from Eridu were nearly always interred with pottery, mainly lying at the feet. Some distinction between the burial gifts does, nevertheless, exist: a few persons were buried with one or more bands of beads around the neck, the wrists, the waist, or the shins — as was the woman in tomb 68 — while others were not. Additionally, some individuals received what have been called "meat bones" (ibid., p. 123). In one instance a dog was even buried with a "youth about fifteen or sixteen years old" (ibid., p. 121), Apart from the odd additional burial gift such as the dog and the figurine, however, there does not seem to be any clear or transparent social, ritual, or economical distinction in burials at Eridu. The mortuary practices at this site were, therefore, more or less the same as they had been at nearby and contemporary Ur.

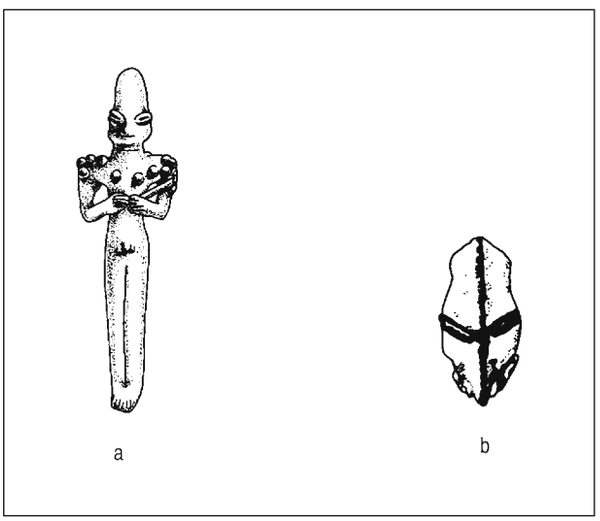


Figure 10.4. (*a*) Male figurine from Eridu (after Safar, Mustafa, and Lloyd 1981: fig. 115a–b), and (*b*) figurine from Tell el-'Oueili, Ubaid 0 (after Breniquet 1996: pl. 4:9)

Tell el-'Oueili was the first southern Mesopotamian site excavated using more modern techniques (Huot 1987, 1989), promising more complete data in contrast to older excavations. While 'Oueili provided essential clues in understanding the evolution of Ubaid-period architecture and pottery manufacture, the same does not hold true for

[2] In these cases, the Ubaid 4 date is harder to ascertain, since most of these bodies are devoid of accompanying ceramics.

oi.uchicago.edu

understanding the meaning and use of human figurines. Five figurine fragments were found at the site (Huot et al. 1980: 109, pl. 4:1–5). They are identical to those found in the graves of Ur and the one found in tomb 68 at Eridu. But behold the snake in the grass: all the ‘Oueili figurines designated as “ophidian” (ibid., p. 109) were surface finds. Nevertheless, four older figurine fragments were found in situ, their morphology clearly pointing toward continuity in figurine production from the Ubaid 0 to the Ubaid 4 period — at least at the site of Tell el-‘Oueili. If any southern Ubaid figurine could be called ophidian, it is the oldest one from ‘Oueili (fig. 10.4b), unearthed in an ashy layer in the vicinity of building 37, the largest building of the site dated to the Ubaid 0 period (Breniquet 1996: 155). Although only the head remains, its dimensions correspond with the general height of later figurines produced in the same tradition in southern Mesopotamia. Further fragments were found in Ubaid 1 debris layers of the settlement (Breniquet 1991: pl. 1:3; 1996: pls. 1:4, 8), indicating that these figurines were fashioned, used, and discarded inside the settlement and not intended exclusively for graves. All four fragments found inside the settlement of ‘Oueili seem to be morphologic precursors of the typical “ophidian” figurines of the Ubaid 4: heads are elongated, painted dots adorn the torsos, the breasts are small and protruding, and dimensions and overall finishing correspond with later figurines.

If we reconsider the very scanty information available from Ur, Eridu, and Tell el-‘Oueili, it seems that southern Ubaid figurines were initially solely used inside the settlement. At ‘Oueili the figurines from the Ubaid 0 and 1 phases were only retrieved in domestic debris contexts. Figurines from the Ubaid 1 and Ubaid 2 periods at Eridu and Ur were equally unearthed inside the settlement, in the case of Ur in combination with a variety of household tools. It is only in the later Ubaid 3 to 4 periods that these figurines were also interred with the dead, and in those cases only the most refined ones. This suggests that for some unknown reason the figurines shifted in use or value from objects used inside the settlement to objects used in a more secluded area, namely a cemetery. Their inclusion in graves is furthermore very temporary: during the Terminal Ubaid levels at Ur, for instance, not a single person is interred with a figurine (Woolley 1955: 56).

Of the many interpretations that have been put forward for human figurines found inside tombs (Ucko 1968: 46), at least two explanations cannot be used for elucidating the southern Ubaid figurine sample. The figurines from Ur and Eridu cannot be children’s toys, since they never occur in children’s graves. The figurines can furthermore not be effigies of the deceased, since all show striking morphological parallels. Their meaning and use as objects accompanying the deceased must therefore be sought in other spheres. Since they are all nearly identical, they point toward the same meaning, the same sense, or the same category of people or creatures that were being represented. McAdam (2003: 184) suggests that they may have been made “in response to certain circumstances and for certain individuals.” Moorey (2003: 19) defines them along the same lines, as depictions of “élite or specialist social groups defining and encoding their status” via standardized representations of cranial modification, masks, and androgynous body forms. Both suggestions are surely valuable, but they seem to be primarily based on intuition or on the figurines’ morphology. Once the different contexts in which these figurines were found are analyzed more thoroughly, we can go further in the examination of their possible function and use in southern Ubaid communities.

Because the majority of the Ubaid 4 graves at Ur and Eridu are devoid of human figurines, it is feasible to suggest that only persons of a certain social esteem or age were granted these objects as burial gifts. As noted above, they were also kept in the domestic sphere and through their shared morphology must thus have had some form of community value prior to death. Indeed, the figurines seem to have been objects used during the lifetime of the deceased, instead of objects created solely to be used as grave goods. It is possible that the figurines belonged to or were manufactured by members of a certain social group — a teacher, chief, shaman, or priest/priestess of some kind; and that they were used for a certain purpose or during a certain ritual or activity that we can no longer reconstruct. Once the probable possessor of the figurine died, it was buried with him, or, as in the case of Eridu, her. The practice of burying figurines that were used during life, along with a deceased sorcerer, has been reported among the Yoruba in Africa (Ucko 1968: 46), in order to prevent inexpert use by other members of the community after the death of the owner. Perhaps our Late Ubaid figurines were buried with their owner for the same purpose. Who made the figurines, whether the proprietor or somebody of his/her social network, is harder to assess. It seems reasonable to suppose that either these figurines were created by the deceased during his or her lifetime as an instrument of value (though the content of that value escapes us now) or a person related to the deceased or appointed by the community created better figurines for burial occasions, since the latter are invariably more finely made than the ones coming from the settlements.

oi.uchicago.edu

NORTHERN MESOPOTAMIA AND WESTERN IRAN: KIN FIGURINES?

Let us see now if sites outside southern Mesopotamia provide some clues to understanding the use and spread of Ubaid-period figurines. If the southern Ubaid figurines originate from anywhere, it must be from Samarran central Mesopotamia, as already suggested by McAdam with regard to figurines from Tell Songor A (McAdam 2003: 176), and to which I add some finds from Choga Mami and Tell es-Sawwan. The figurine industry from Tell Songor informs us on the practice of burying only the better figurines with the deceased, if we accept that the southern Ubaid ones have their antecedents in central Mesopotamia and that this figurine tradition moved farther south during the Choga Mami Transitional and Ubaid 0 periods. The Songor A figurines were nearly all found inside the largest buildings of the site (Fujii 1981: 168). The exception is the only complete one (fig. 10.3a), which was found inside a grave, suggesting that only some members of the Songor community needed or were entitled to shape or use these figurines during their life, and that only some were entitled to be buried with them.

Whereas the so-called Ubaid expansion[3] is primarily visible in architecture and pottery, the same does not hold true for the figurine industries. At Tell Abada in central Mesopotamia, for instance, figurine fragments were found (Jasim 1985: fig. 41a–c) that are not in any way comparable to the southern Mesopotamian examples. Similarly, the contemporary northern Mesopotamian figurines have nothing to do with what was produced in the south. The figurines from the north are nearly always conservative adaptations of what was fashioned during the preceding Hassuna and Halaf periods, as was the case with some figurines from the "Ubaid levels" at Telul eth-Thalathat (Fukai, Horiuchi, and Matsutani 1970: fig. 1, pl. 36, and fig. 9, pl. 80), Tell Arpachiyah (Mallowan and Rose 1935: fig. 45:16), and Tepe Gawra (Tobler 1950: fig. c, pl. 81, and fig. 3, pl. 153). The exceptions are some figurine fragments from Tell Arpachiyah (Mallowan and Rose 1935: fig. 45:4–5) and one figurine from Tepe Gawra (Tobler 1950: fig. 6, pl. 153) that is slightly reminiscent of a southern Ubaid 1 figurine with baudrier found at Tell el-'Oueili (Breniquet 1996: pl. 1:4). The latter figurines might therefore have been imports instead of locally manufactured artifacts, since overall the contemporary figurine evidence from the north does not show any southern affinities or "Ubaidness" compared to the figurines that were being manufactured and used in the south.

Several western Iranian sites, in contrast, display a figurine industry paralleling some figurines from southern Mesopotamia. The most obvious example is a standing female figurine from the site of Dum Gar Parchineh (fig. 10.5a), located in Luristan Province. This figurine bears a striking resemblance to the female figurines found in some of the graves at Ur, albeit that the Parchineh figurine is more roughly shaped and finished. What is more important is that it is the only figurine of its kind recovered in Iran, inside an empty tomb in a cemetery that contained some sixty-four large and rectangular stone graves (Haerinck and Overlaet 1996: 9). The site of Parchineh has been interpreted as a cemetery where pastoral nomads were interred during the Middle Chalcolithic (Vanden Berghe 1987: 91–92). Since a small number of these graves were devoid of any skeletal material, but did contain other material, such as pieces of flint and pottery, Henrickson (1986) suggested that these cenotaphs were meant for people

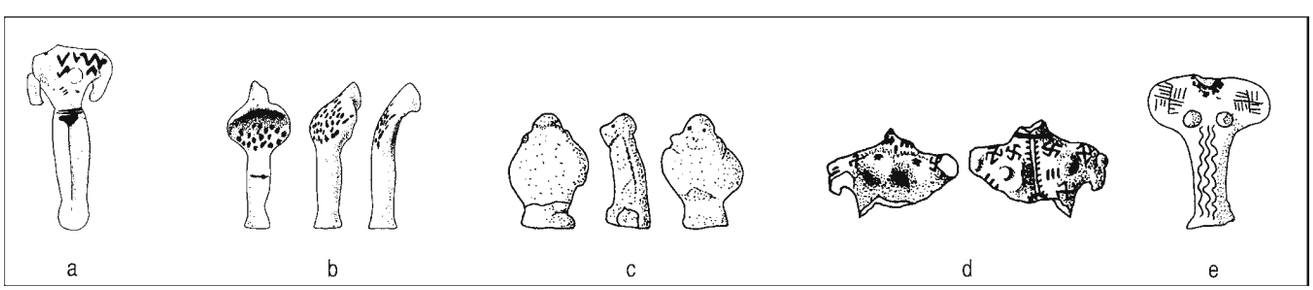


Figure 10.5. Western Iranian figurines from (*a*) Parchineh (after Haerinck and Overlaet 1996: 18), (*b*) Susa (after Spycket 1992: fig. 7, pl. 2), (*c*) Choga Bonut (after Alizadeh 2003: fig. 30f), and (*d, e*) Tall-i Bakun (after Langsdorff and McCown 1942: pls. 7:1 and 6:17)

[3] As is evident from several other papers presented during the conference, it is questionable whether there was an Ubaid expansion from the south toward the north and the west of Mesopotamia. Rather, mutual influences and adaptations or local variations of the material must have occurred throughout these regions.

oi.uchicago.edu

who died too far away from the graveyard to be returned for burial. Whatever distance "too far away" may have been, it is possible that the person who was supposed to be buried inside tomb B69-1, where the female figurine, a hand stone, and a few pieces of flint were found (Haerinck and Overlaet 1996: 18), may at some point have been in contact with people from the neighboring south of Mesopotamia.

Some of the stylized figurines from the Susa I levels at Tepe Djaffarabad and Susa (fig. 10.5b) located in the Susiana Plain of Khuzistan are termed "cobra" figurines. They portray an erect and protruding position that is believed to be reminiscent of an attacking cobra[4] (Spycket 1992: 10). These figurines, with their long, tubular bodies, have often been compared with some of the stylized and sexless human figurines from Uruk (fig. 10.1c). From the site of Djaffarabad only one cobra figurine is known, which was retrieved from a figurine workshop (Dollfus 1971: 56). The other seven figurines of this type all come from the site of Susa (Spycket 1992: 10–11, pls. 2 and 3). Six of them do not have a context assigned, but all are said to come from Susa I levels of the settlement's Acropolis (ibid., p. 10). One figurine was reported as coming from a child's grave (ibid., p. 11, pl. 3:14). It is the only figurine that is portrayed seated and displaying the male sex. Although morphological links with the stylized southern Ubaid figurines are evident for these "cobra" figurines, they nevertheless also share parallels with two older figurines from the more nearby sites of Choga Bonut (e.g., fig. 10.5c) and Choga Mish (Delougaz, Kantor, and Alizadeh 1996: 484–85, pl. 237f). The latter figurines date respectively to the Archaic Susiana 0 and Archaic Susiana 1 levels, which correspond roughly to the Ubaid 0 and Ubaid 1 phases of southern Mesopotamia. The figurines from Susa, Djaffarabad, Choga Mish, and Choga Bonut furthermore range between 5 and 10 cm in height when complete, which also corresponds to the average height of the stylized figurines from Ubaid southern Mesopotamia.

The Iranian figurines that share the most features with the southern Ubaid ones, however, are the figurines from Tall-i Bakun levels III and IV (e.g., fig. 10.5d). These were all found inside the settlement but with no additional contextual information. Some head fragments from Bakun (Langsdorff and McCown 1942: figs. 24, 26, and 27, pl. 6) are known. They all display an exaggeratedly elongated head, a feature also present on the southern Ubaid figurines, which may very well be an indication of artificial cranial modification or a special type of head gear or hairdo (Daems and Croucher 2007). The excessive body decoration that is visible on the torso of nearly all the Bakun figurines is reminiscent of the black painted dots and clay pellets that occur on the figurines from southern Mesopotamia. Additionally, some of the more stylized female figurines from Bakun (fig. 10.5e) show parallels with the "cobra" figurines from Susiana Plain sites and with some of the more stylized figurines from the southern Mesopotamian site of Uruk. In contrast to northern and central Mesopotamia, it therefore seems that western Iran was much more in contact with southern Mesopotamia, at least where the production of human figurines is concerned.

BY WAY OF CONCLUSION

If the makers and users of the southern Ubaid figurines had left us their little statuettes conveniently in a good primary context, with accompanying, readable, and understandable labels, then this contribution, as many others, would never have been written. As archaeologists we are necessarily inclined to produce our own labels — especially where it concerns non-literate societies — in order to "classify" and understand past man-made things. One of the labels offered for the southern Ubaid figurines has been the firmly embedded term "ophidian," which was primarily derived from the figurines' grotesque facial features, believed to represent a snake's head. These disproportionate facial features, as well as the often elongated head, might nevertheless hint at something else. Perhaps the long head was an indicator of artificial skull modification practiced on sections of Ubaid society (Molleson and Campbell 1995; Moorey 2003: 19; Wengrow 1998: 792). Or perhaps an exaggerated hairdo was intended. It is equally feasible to suggest that the combination of an abnormally elongated head and grotesque facial features represented masks worn during special occasions and ceremonies that we can no longer reconstruct. Although the dots and pellets on the torso of the southern Ubaid figurines have often been identified as snake's scales, I believe they may represent body paint, tattoos, or intentionally created scar tissue. The act of dramatically painting the body and practicing in-

[4] It is interesting to note that these "cobra" figurines, like the "ophidian" ones, received a name that is equally connected to the snake and, by extension, the animal world. Whether the term "cobra" was subconsciously given because of the already firmly rooted "ophidian" name used to identify some of the southern Mesopotamian figurines is hard to evaluate, but it is nevertheless a possibility.

oi.uchicago.edu

tentional scarification and tattooing is in some parts of the world still associated with strength and the power to overcome pain, particularly in the transition from one physical phase or age into another. Equally, scarring may reflect irreversible affiliation or affinity with a certain group, perhaps once a certain physical stadium is attained. Given the slender, erect, and youthful body of these figurines, as well as the fine red powder found on some of the bodies at Ur, this may precisely be what is intended to be portrayed by the southern Ubaid figurines: the passing from one physical stage, age, or lifetime into another. The absence of written sources and renewed excavation means we may never know if this is the case, or whether they were aids for special persons, used during their life and after their death. Whatever new evidence may be forthcoming, I hope I have demonstrated that there is more significance to these figurines than a simple definition as "ophidian" based solely on morphology.

ACKNOWLEDGMENTS

I thank Erik Smekens (Ghent University, Belgium) for drawing half the figurines used in this contribution. The other drawings are by the author. Sincere thanks are also due to the anonymous reviewers for their suggestions made in relation to some aspects of this paper.

BIBLIOGRAPHY

Adams, Robert McC.

1975 "An Early Prehistoric Site in the Warka Region." *Sumer* 31: 11–15.

Alizadeh, Abbas

2003 *Excavations at the Prehistoric Mound of Choga Bonut, Khuzestan, Iran: Seasons 1976/77, 1977/78, and 1996*. Oriental Institute Publications 120. Chicago: The Oriental Institute.

Balter, Michael

2004 *The Goddess and the Bull: Catalhoyuk: An Archaeological Journey to the Dawn of Civilization*. New York: Free Press.

Barrelet, Marie-Thérèse

1968 *Figurines et reliefs en terre cuite de la Mésopotamie antique* 1: *Potiers, termes de métier, procédés de fabrication et de production*. Bibliothèque archéologique et historique 85. Paris: Paul Geuthner.

Breniquet, Catherine

1991 "Les petits objets de l'époque d'Obeid découverts à Tell el-'Oueili en 1985." In *Oueili: Travaux de 1985*, edited by J.-L. Huot, pp. 313–20. Éditions recherche sur les civilisations, mémoire 89. Paris: Éditions recherches sur les civilisations.

1996 "Les petits objets découverts à Tell el Oueili en 1987 et 1989." In *Oueili: Travaux de 1987 et 1989*, edited by J.-L. Huot, pp. 151–62. Paris: Éditions recherches sur les civilisations.

2001 "Figurines ophidiennes." In *Études mésopotamiennes: Recueil de textes offerts à Jean-Louis Huot*, edited by C. Breniquet and C. Kepinski, pp. 45–55. Paris: Éditions recherches sur les civilisations.

Charvat, Petr

1993 *Ancient Mesopotamia: Humankind's Long Journey into Civilization*. Dissertationes orientales 47. Prague: Oriental Institute.

Collon, Dominique

1995 *Ancient Near Eastern Art*. Berkeley: University of California Press.

Daems, Aurelie

2005 Human Figurines from Neolithic to Chalcolithic Iran and Iraq: A Reassessment of Function and Use through Material, Morphology, Type, Damage and Context. Ph.D. dissertation, Ghent University.

oi.uchicago.edu

2007 "Evaluating Patterns of Gender through Mesopotamian and Iranian Figurines: A Reassessment of the Neolithic and Chalcolithic Period Industries." In *Gender through Time in the Ancient Near East*, edited by D. Bolger, pp. 77–117. Gender and Archaeology Series. Lanham: AltaMira Press.

Daems, Aurelie, and Karina Croucher

2007 "Artificial Cranial Modification in Prehistoric Iran: Evidence From Crania and Figurines." *Iranica Antiqua* 42: 1–21.

David, H.

1983 Les figurines de terre cuite à l'époque d'Obeid en Mésopotamie du Sud. M.A. thesis, University of Paris.

de Genouillac, Henri

1936 *Époques d'Ur, III^e Dynastie, et de Larsa*. Fouilles de Telloh 2. Paris: Paul Geuthner.

Delougaz, Pinhas; Helene J. Kantor; edited by Abbas Alizadeh

1996 *Chogha Mish* 1: *The First Five Seasons of Excavations: 1961–1971*. Oriental Institute Publications 101. Chicago: The Oriental Institute.

Dollfus, Geneviève

1971 "Les fouilles à Djaffarabad de 1969 à 1971." *Cahiers de la Délégation archéologique française en Iran* 1: 17–86.

Eller, Cynthia

2000 *The Myth of Matriarchal Prehistory: Why an Invented Past Won't Give Women a Future*. Boston: Beacon Press.

Fujii, H., editor

1981 "Preliminary Report of Excavations at Gubba and Songor." *Al-Rāfidān* 2: 131–241.

Fukai, Shinji; Kiyoharu Horiuchi; and Toshio Matsutani

1970 *Telul eth Thalathat* 2: *The Excavation of Tell II; The Third Season (1964)*. Tokyo University Iraq-Iran Archaeological Expedition, Report 11. Tokyo: Yamakawa.

Gimbutas, Marija

1974 *The Gods and Goddesses of Old Europe: 7000 to 3500 B.C.; Myths, Legends and Cult Images*. London: Thames & Hudson.

1991 *The Civilization of the Goddess*. San Francisco: Harper.

2001 *The Language of the Goddess: Unearthing the Hidden Symbols of Western Civilization*. London: Thames & Hudson.

Haerinck, E., and B. Overlaet

1996 *The Chalcolithic Period, Parchinah and Hakalan*. Luristan Excavation Documents 1. Brussels: Royal Museums of Art and History.

Hall, Henry R.

1923 "Ur and Eridu: The British Museum Excavations of 1919." *Journal of Egyptian Archaeology* 9: 177–95.

Hall, Henry R., and C. Leonard Woolley

1927 *Al-'Ubaid*. Ur Excavations 1. Oxford: University Press.

Heinrich, E.

1937 "Die Grabung im Planquadrat K XVII." *Vorläufiger Bericht über die Ausgrabungen in Uruk-Warka* 8: 27–55.

Henrickson, Elizabeth F.

1986 "The Early Development of Pastoralism in the Central Zagros Highlands (Luristan)." *Iranica Antiqua* 20: 1–42.

Huot, Jean-Louis

1987 "Un village de Basse-Mésopotamie: Tell el'Ouelli à l'Obeid 4." In *Préhistoire de la Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du djebel Hamrin* (Colloque international du Centre National de la Recherche Scientifique, Paris 17–19 décembre 1984), edited by J.-L. Huot, pp. 293–303. Paris: Éditions du Centre National de la Recherche Scientifique.

oi.uchicago.edu

1989 "Ubaidian Villages of Lower Mesopotamia: Permanence and Evolution from 'Ubaid 0 to 'Ubaid 4 as Seen from Tell el 'Oueili." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 19–42. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Huot, Jean-Louis; L. Bachelot; J.-P. Braun; Yves Calvet; S. Cleuziou; Jean-Daniel Forest; and J. Seigne

1980 "Larsa: Preliminary Report of the Seventh Campaign at Larsa and the First Campaign at Tell el 'Oueili (1976)." *Sumer* 36: 99–127.

Ippolitoni-Strika, F.

1998 "Clay Human Figurines with Applied Decoration from Tell es-Sawwan." *Mesopotamia* 33: 7–22.

Jasim, Sabah A.

1985 *The 'Ubaid Period in Iraq: Recent Excavations in the Hamrin Region*. British Archaeological Reports, International Series 267. Oxford: British Archaeological Reports.

Jordan, Julius

1932 *Ausgrabungen in Uruk 1930/31*. Dritter vorläufiger Bericht über die von der Notgemeinschaft der deutschen Wissenschaft in Uruk unternommenen Ausgraben. Berlin: Walter de Gruyter.

Langsdorff, Alexander, and Donald E. McCown

1942 *Tall-i-Bakun A: Season of 1932*. Oriental Institute Publications 59. Chicago: University of Chicago Press.

Lloyd, Seton, and Fuad Safar

1943 "Tell Uqair: Excavations by the Iraq Government Directorate of Antiquities in 1940 and 1941." *Journal of Near Eastern Studies* 2: 131–58.

Mallowan, M. E. L., and J. Cruikshank Rose

1935 "Excavations at Tall Arpachiyah." *Iraq* 2: 1–178.

McAdam, E.

2003 "Things Fall Apart, the Centre Cannot Hold." In *Culture through Objects: Ancient Near Eastern Studies in Honour of P. R. S. Moorey*, edited by T. F. Potts, M. Roaf, and D. Stein, pp. 161–87. Oxford: Griffith Institute.

Molleson, T., and Stuart Campbell

1995 "Deformed Skulls at Tell Arpachiyah: The Social Context." In *The Archaeology of Death in the Ancient Near East*, edited by S. Campbell and A. Green, pp. 45–55. Oxbow Monograph 51. Oxford: Oxbow Books.

Moorey, P. R. S.

2003 *Idols of the People: Miniature Images of Clay in the Ancient Near East.* Oxford: Oxford University Press.

Neumann, Erich

1956 *Die Grosse Mutter: Eine Phänomenologie der weiblichen Gestaltungen des Unbewussten*. Zurich: Rhein-Verlag.

Oates, Joan

1969 "Choga Mami, 1967–68: A Preliminary Report." *Iraq* 31: 115–52.

1983 "Ubaid Mesopotamia Reconsidered." In *The Hilly Flanks and Beyond: Essays on the Prehistory of Southwestern Asia Presented to Robert J. Braidwood, November l5, 1982*, edited by T. C. Young, P. E. L. Smith, and P. Mortensen, pp. 251–81. Studies in Ancient Oriental Civilization 36. Chicago: The Oriental Institute.

Safar, Fuad; Mohamed A. Mustafa; and Seton Lloyd

1981 *Eridu*. Baghdad: Ministry of Culture and Information.

Spycket, A.

1992 *Les figurines de Suse* 1: *Les figurines humaines; IV^e–II^e millénaires av. J.-C*. Mémoires de la Délégation archéologique en Iran 52. Paris: Gabalda.

oi.uchicago.edu

Strommenger, Eva

1963 "Kleinfunde aus dem Eanna-Heiligtum und von der Qal'a des Ḥağği Muḥammad." In *Ausgrabungen in Warka*, edited by H. J. Lenzen, pp. 23–24. Vorläufiger Bericht über die Ausgrabungen in Uruk-Warka 19. Berlin: Gebrüder Mann.

Tobler, Arthur J.

1950 *Excavations at Tepe Gawra: Levels IX–XX*. Joint Expedition of the Baghdad School and the University Museum to Mesopotamia 2. Museum Monographs. Philadelphia: University of Pennsylvania Press.

Ucko, Peter J.

1968 *Anthropomorphic Figurines of Predynastic Egypt and Neolithic Crete with Comparative Material from the Prehistoric Near East and Mainland Greece*. Royal Anthropological Institute, Occasional Papers 24. London: Andrew Szmidla.

Van Buren, E. Douglas

1930 *Clay Figurines of Babylonia and Assyria*. Yale Oriental Series, Researches 16. New Haven: Yale University Press.

Vanden Berghe, L.

1987 "Luristan, Pusht-i Kuh au Chalcolithique Moyen (Les nécropoles de Parchinah et de Hakalan)." In *Préhistoire de la Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du djebel Hamrin* (Colloque international du Centre National de la Recherche Scientifique, Paris 17–19 décembre 1984), edited by J.-L. Huot, pp. 91–125. Paris: Éditions du Centre National de la Recherche Scientifique.

Wengrow, David

1998 "The 'Changing Face of Clay': Continuity and Change in the Transition from Village to Urban Life in the Near East." *Antiquity* 72: 783–95.

Woolley, C. Leonard

1955 *The Early Periods*. Ur Excavations 4. Philadelphia: University Museum Philadelphia; London: British Museum.

Wrede, Nadja

2003 *Uruk, Terrakotten* I: *Von der 'Ubaid- bis zur altbabylonischen Zeit*. Ausgrabungen in Uruk-Warka, Endberichte 25. Mainz am Rhein: Philipp von Zabern.

Ziegler, Charlotte

1962 *Die Terrakotten von Warka*. Ausgrabungen der Deutschen Forschungsgemeinschaft in Uruk-Warka 6. Berlin: Gebrüder Mann.

oi.uchicago.edu

11

THE TERM "HAJJI MUHAMMAD": A RE-EVALUATION

HARRIET CRAWFORD, *University College London*

In Mesopotamian archaeology a single term is often used to describe both a style of artifact, usually pottery, and a period of time during which that artifact occurred. This assumes that styles do not overlap, but are neatly confined to well-defined periods of time. Experience shows that this, sadly, is not the case.[1] "Hajji Muhammad" is an example of such a dual usage, the term being used to describe a distinctive style of pottery and a period of time. This paper endeavors to show that this style of pottery is not confined to a single chronological phase and has no independent chronological existence. Other possible explanations for its appearance are then explored.

In her seminal paper published in 1960 and revised in 1987, Joan Oates showed that the pottery styles found in south Mesopotamia and formerly known, respectively, as Eridu, Hajji Muhammad, Ubaid 1, and Ubaid 2, form part of a continuous development (Oates 1960, 1987a). The styles were re-named Ubaid 1–4 to underline this essential continuity and are generally taken to belong to a single chronological period of the same name. Since the scheme was proposed by Oates, an earlier phase known as Ubaid 0 has been identified at Tell el-'Oueili (see below) and a Terminal Ubaid or Ubaid 5 begins to fill the gap between the end of Ubaid 4 and the beginning of the Uruk period. Ubaid 3 can also now be subdivided into two phases a and b (Oates 1987a: 479, chart 1). Each of these phases, although stylistically related, is generally taken to have a separate chronological existence. The whole sequence is now thought to cover the mid-sixth to mid-fifth millennia.

Hajji Muhammad ware is usually defined by a very distinctive type of "reserved" decoration, where the pattern is created by allowing the body of the pot to show through thickly applied dark-purplish paint. Alternatively, the color wash may be scraped away to show the underlying clay. The patterns are sometimes sinuous curves and can also be small, tightly knit, oblique checkerboard designs or herringbone arrangements of straight lines. Certain shapes of vessel are generally thought to be characteristic of the Hajji Muhammad phase, but these have longer life-spans than the Ubaid 2 (see below). In this paper no attempt is made to re-classify the pottery, and the original classifications made by the excavators are adhered to. There are no other type fossils associated with this pottery in terms of small finds, and no distinctive architecture was found uniquely with it.

The picture is not a straightforward one, however. The transitional nature of the style is obvious and has been remarked on for many years, since its identification at Eridu (Safar, Mustafa, and Lloyd 1981: 176). In some cases, as already remarked by Oates, Hajji Muhammad designs occur on Ubaid 1 vessel shapes; reserved decoration often appears on the inside of a vessel, while Ubaid 3 decoration is seen on the outside. Conversely, some distinctive Ubaid 3 shapes such as the tortoise jar are sometimes decorated with reserved slip decoration; there is also some continuity of form between the two styles (Oates 1960: 35, 38).

A critical survey of the occurrence of this distinctive pottery in south Mesopotamia makes it appropriate to question the validity of Hajji Muhammad ware as a unique chronological marker, as it has not yet been found alone in a distinct chronological horizon. It is always associated with either Ubaid 1, or more commonly Ubaid 3 ware. Its status as a distinctive pottery style is not at issue. At the sites where it has been recorded, it is either a surface find, or the stratigraphic context was not recorded, or it occurs together with other Ubaid pottery styles. At the type-site Hajji Muhammad itself, Ziegler reports that a sounding 4 m in depth was opened, but few sherds could be assigned to a stratigraphic level (1953: 12). Ubaid 3 and Halaf sherds were recorded.

[1] Recently, for example, work on the sequence from Nippur has shown that "Early Dynastic" artifacts continue to occur well into the Agade period (Gibson and McMahon 1995).

oi.uchicago.edu

In order to assess this claim, we look in more detail at the limited number of sites in south Mesopotamia where Hajji Muhammad pottery is found in a stratigraphic context. Next, we look at sites outside the southern plain, firstly those in the Jebel Hamrin, then those in southwest Iran, and, finally, those in the northern Gulf, where the pottery has also been identified. It is possible that information from these areas can clarify the position, although it is accepted that findings from outside the southern plain may not be applicable within it. Hajji Muhammad pottery is almost entirely absent from north Mesopotamia, although a few sherds, sadly out of context, were found at Tell Brak (Oates 1987b).

The three sites on the southern plain where Hajji Muhammad wares have been found in stratified contexts are Eridu, 'Oueili, and Ras al-Amiya. It addition, it has been found quite widely as a surface find on the plain, from the area of Kish in the north to Eridu in the south (Oates 1960: 48). We look first at the sequence at the site of Eridu, which is, unfortunately, in part from re-deposited fill inside the platform of the later temples and therefore is to some degree contaminated. This provenance, closely associated with a series of major public buildings, also raises the question of how representative the published collection is of the whole corpus of Ubaid pottery, especially in view of the evidence from Ras al-Amiya (see below) for coarse wares. It may be that these were present but not studied by the excavators of Eridu.

According to Oates (1960), the pottery can be divided into four phases: levels XIX–XV = Eridu/Ubaid 1; XIV–XII = Hajji Muhammad/Ubaid 2; XII–VIII = Ubaid 3; and VII–VI = Ubaid 4. What is very clear is that there is an undoubted break in the architectural sequence. Three buildings of indeterminate status were recovered from levels XV, XVI, and XVII in the lower part of the sequence, and there is then an absence of building remains until level XI, where part of a monumental building, generally considered to be a temple, was recovered. This is the first of a series of six buildings so defined. Between these two groups of buildings are level XIV, which comprises the brick packing of the ruins of the building in level XV, and levels XIII and XII, which are said to be occupation levels. A large robber trench had been sunk to these levels, and robbers had also dug out a second trench from the base of the first leading toward the ziggurat (Safar, Mustafa, and Lloyd 1981: 90). As there are no published sections, it is not clear whether XIII and XII are real occupation levels or whether they mark two phases in the construction of the platform on which Temple XI stood. In either case, the packing of the temple platform and/or the digging of the robber trenches indicates that the finds from these levels are bound to be chronologically mixed.

Unfortunately for the present inquiry, it is these intermediate levels that have yielded the highest concentrations of Hajji Muhammad pottery. The excavators assigned levels XIV–XII to this phase, as does Oates, and the chart they published (Safar, Mustafa, and Lloyd 1981: fig. 72) shows three types of vessel attributed to these: types 24, 25, and 26. The highest concentrations of type 24, a wide carinated bowl with painted decoration both inside and out, are found in levels XIV to XII, but it continues to occur into level VIII, covering Ubaid 2 and 3 in Oates' terminology. A second form, type 25, a much deeper wide-mouthed bowl with a sinuous profile and in some cases a carinated base, appears in earlier Ubaid levels, but is most common in levels currently designated as Hajji Muhammad or Ubaid 2. A third type of simple bowl, type 26, is also from levels XIX–XII, although the numbers peak below level XIV. These overlaps show clearly that there is no single level at Eridu where diagnostic Hajji Muhammad pottery occurs alone: it always overlaps with either Eridu/Ubaid 1 or Ubaid 3, which continues after the disappearance of Hajji Muhammad wares. It is impossible to know how much of this overlap is due to the probable contamination of the stratigraphy by later interference and how much reflects a genuine chronological overlap. The evidence from Eridu is, sadly, deeply flawed.

The French excavations at 'Oueili, close to Larsa, have provided important new evidence for Ubaid 0 and Ubaid 1, but unfortunately the evidence for Hajji Muhammad ware is very limited. It also seems that the stratigraphic context is again unreliable as the sondage X36 from which the relevant pottery comes is probably from ancient fill or leveling operations. The total number of sherds is low but, as yet, there is no context where it is found on its own. In level 9 it occurs with Ubaid 3 ware (Calvet 1987a: 467, 1987b: 40) and in other contexts with Eridu ware. Once again the overlap with the other phases is the striking feature of the sequence.

Our third site, Ras al-Amiya, just north of Kish, was a rescue excavation carried out on behalf of the British School of Archaeology in Iraq (Stronach 1961), and the picture it presents is the same as that at Eridu and 'Oueili. Only a small area of the site, which was deeply buried by silt, could be uncovered, but four building levels were identified, the lowest of which was below the water table. Three pottery wares were present: heavy, ordinary, and fine. The painted wares had patterns that could be closely matched in levels XII–VIII at Eridu, that is to say, the late Hajji Muhammad/Ubaid 2 to Ubaid 3 phases. There was no apparent change either in the style of decoration or in

oi.uchicago.edu

the proportion of one ware to another throughout the sequence. No Eridu/Ubaid 1 ware was found, nor is there evidence for the continuation of Ubaid 3 after the disappearance of the Hajji Muhammad pottery as at Eridu.

In summary, the admittedly flawed evidence from the three stratified sites discussed above illustrates convincingly the overlap between Hajji Muhammad and Eridu/Ubaid 1 wares on the one hand, and between Hajji Muhammad and Ubaid 3 pottery on the other. There is also clear evidence for Ubaid 3 ware continuing after the disappearance of Hajji Muhammad pottery at Eridu itself.

The second area to be discussed lies east of the Tigris River in the Jebel Hamrin and the Mandali regions. This area was intensively surveyed and excavated in advance of the building of a dam in the 1970s, and as a result more sites with Ubaid pottery are probably known from here than from any other comparable area. This reflects the intensity of the rescue work rather than suggesting that this is the core area of the Ubaid pottery. Sadly, most of the evidence comes from surface survey or from sites that have not been properly published. The exception to this is the stratified sequence uncovered at Tell Abada. It seems that the majority of the sites in the Hamrin fall into the later Ubaid period, and sites with Hajji Muhammad-related wares are relatively rare (for a summary of the evidence, see Jasim 1985: ch. 4). One striking feature of these Ubaid-related sites is the range of pottery styles found on some of them, with wares such as Samarra and Choga Mami Transitional (CMT) from the earlier levels, as well as Halaf from north Mesopotamia, in addition to Dalma ware and red burnished wares from Iran in slightly later levels. This variety of styles serves to underline the significance of the region as a crossroads between north and south as well as between east and west. It also provides us with a further set of chronological correlations that are not discussed in detail here.

The evidence from Abada is perhaps best known for the fine architectural plans and the exposure of almost a whole village plan (Jasim 1985). Three levels of housing were identified, and the lowest of these, level III, contains CMT, Samarra, Ubaid 1, and Hajji Muhammad pottery. There, then, seems to be a break in the sequence of levels marked by a sterile layer about 70 cm thick. Level II contains Hajji Muhammad and Ubaid 3 wares with the former predominating. A few late Halaf sheds also occur, while in level I Ubaid 3 pottery is the most common find (ibid., pp. 90ff.). This sequence agrees with that established by the evidence from the south and would seem to confirm the overlap between Ubaid 1 and Hajji Muhammad pottery on the one hand and Hajji Muhammad and Ubaid 3 on the other. The overlap with late Halaf is also of interest, while some of the later Ubaid pots find their closest parallels with northern rather than southern Ubaid ware, as suggested for example for Abu Husaini (ibid., p. 165).

The site of Tell Songor, which is not far from Abada, is composed of three mounds, A, B, and C, all in part contemporary, and adds another strand of information. The northern area of Songor A has houses similar in style to those from Samarra sites, and a fine two-story kiln was associated with them (Fujii 1981: 168). The pottery too is thought to be late Samarra with some Ubaid material from later Ubaid burials (Matsumoto 1987). A number of kilns were also found in level 4 at Songor B, where most of the pottery was said to be Halaf related, and in level 1 which produced some Hajji Muhammad wares as well as Halaf-related ones. We have here the first site at which it is possible that Hajji Muhammad ware was actually produced, although, given the presence of a range of other pottery styles, we cannot be certain of this. Finally, Songor C also yielded Hajji Muhammad and Ubaid 3 pottery.

Insofar as evidence from this peripheral zone can be used as evidence for developments on the southern plain of Mesopotamia, it confirms the overlap of styles that we have already seen elsewhere and also shows conclusively that late Halaf pottery was contemporary with both Hajji Muhammad and Ubaid 3 wares. It would, however, be unfounded to assume on the evidence for manufacture at the site of Songor that this area is the source of all Hajji Muhammad pottery found in south Mesopotamia.

The importance of the Hamrin Valley as a north–south route has already been referred to, and close links between the region and southwestern Iran can be seen from early in the Ubaid period. The links are close with both the Deh Luran and the Susiana plains, as Frank Hole (Hole 1987) and Genevieve Dollfus (Dollfus 1983a, 1983b) have demonstrated. On the Deh Luran Plain, the Khazineh pottery shows parallels with Hajji Muhammad wares in both the shapes of some of the vessels and the use of reserved decoration. This style is succeeded in Deh Luran by the Mehmeh style, whose links appear to be closest with Ubaid 3.

Based on her work at a number of sites, including Djowi, Bendebal, and Djaffarabad, Dollfus has proposed a periodization for Susiana of which Periods 8, 9, and 10 are especially relevant to our inquiry. Her period 8 covers levels 16–13 at Djowi and has close relations with Ras al-Amiya and Eridu XII–IX, including late Hajji Muhammad in the terminology of Safar and colleagues (1981), or late Ubaid 2 in that of Oates (1987a). There are also parallels with Khazineh wares on the adjacent Deh Luran Plain (Dollfus 1983a: 165–66) and with Djaffarabad 4 and Middle Susiana Choga Mish. Her period 9, Djowi 12–11, is linked with Eridu XI–X and period 10, Djowi 10-5/4,

oi.uchicago.edu

with Ubaid 3 and the Mehmeh phase in Deh Luran. This would once again seem to confirm the survival of Ubaid 3 beyond the levels in which it occurs with Hajji Muhammad ware.

Finally, we turn to evidence from the west side of the Arabian Gulf[2] where Ubaid pottery has been found at a number of sites, as reported by Masry and Oates (Masry 1997; Oates et al. 1977). Recent excavations at the site of H3, as-Sabiyah, in Kuwait, have produced good stratigraphic evidence for the presence of both Hajji Muhammad and Ubaid 3 pottery in all four phases of the site. There is apparently no stylistic change detectable, and the ratio of one style to the other remains constant throughout, as at Ras al-Amiya. A limited quantity of local coarse ware was also present. At this site there is no evidence for the later Ubaid wares, although they have been found elsewhere in the Gulf (Carter and Crawford forthcoming).

The stratigraphic evidence we have quoted from south Mesopotamia, the Hamrin, southwest Iran, and the Gulf is far from satisfactory, but there is now enough of it to be able to raise serious doubts about the status of Hajji Muhammad ware as the marker of a separate chronological period. Instead, we should probably now see it as defining the later part of the Ubaid 1 period and the early stages of the Ubaid 3 period. There is, as yet, no instance in which it is the only pottery style found in a stratigraphic context.

If it is accepted that Hajji Muhammad sherds appear in levels with other types of pottery, it is appropriate to consider different interpretations to explain its presence. Three possibilities are considered: (1) that it was the product of a single workshop, or even theoretically of one inventive potter; (2) that it was a regional speciality; or (3) that it was a special-purpose ware.

1) The quantity and wide distribution of the ware make it unlikely that it was the product of a single workshop, especially as there is little evidence for the presence of any large-scale specialist pottery workshops at this time, and even more unlikely that it was the work of a single craftsman.

2) It is entirely possible that it was linked to a specific region and was produced within it. This is the region from the Zagros to the Euphrates across the south Mesopotamian Plain. It includes the Hamrin area, which was also the channel through which contacts with southwestern Iran took place, thus explaining the obvious parallels with Khazineh pottery from the Deh Luran Plain. The material found in the Gulf probably came by sea from the south of the Mesopotamian Plain (Carter 2006); there is no evidence for its manufacture in the Gulf.

3) Can Hajji Muhammad pottery be considered as a special-purpose ware? Its association with the public buildings in the Temple Sounding at Eridu might suggest that it had a role to play in rituals of some sort. However, its occurrence in domestic settings at Ras al-Amiya and Abada indicates that these rituals were not exclusive to major public buildings. It is also of significance that the majority of the shapes of the vessels decorated in this manner are suitable for use in eating and drinking. We have already mentioned the highly decorated wide carinated bowls, suitable for serving food. Smaller bowls and cups may have been used for drinking or eating by individuals. There are very few closed shapes found in this style, so they are unlikely to have been used for storage. The sophisticated decoration also strongly suggests that there was an element of display involved in its use.

Bearing this in mind, it can be proposed that Hajji Muhammad wares did have a special purpose, even if not one solely associated with major public buildings. We can suggest that it may have been used for more formal eating or feasting, at a communal or familial level. Feasting is a widespread phenomenon in many types of society, from hunter-gatherers to empires. It has important social functions in reinforcing community solidarity, or in underlining social differences within the group; it can also assist in building alliances at individual, group, or state levels; it can inaugurate or consolidate partnerships and has a part to play in the redistribution of goods. In small settled groups such as those that seem to have predominated during the Ubaid period, feasting would have provided an occasion when the whole community could join together, perhaps to celebrate harvests or major rites of passage, or indeed for any of the other purposes listed above (Dietler and Hayden 2001). Such a model would explain the presence of high-quality wares at small villages such as Abada and Ras al-Amiya, as well as at the major site of Eridu, as the feasting could have taken place on a variety of different scales.

---

[2] There is also said to be Ubaid-related pottery from a site on the Bushehr Peninsula (Oates 1983: 255), but it is still unpublished.

oi.uchicago.edu

In summary, the evidence that we have at present suggests that Hajji Muhammad wares occur in the later part of the Ubaid 1 phase and the earlier part of Ubaid 3, something that is apparent in the table published by Safar, Mustafa, and Lloyd in 1981. The term Ubaid 2 should probably be dropped. This pottery was probably produced at a number of centers across the southern Mesopotamian Plain and in the area east of the Tigris. The proposed usage for formal eating and drinking made them a desirable item for display purposes in a society that was, perhaps, beginning to see the emergence of a social hierarchy. Its absence in the north of Mesopotamia may be due to the fact that some other ware may have fulfilled the same role, perhaps the fine Halaf wares found in the shape of goblets and serving dishes. Alternatively, a different social system may have been in place where feasting did not play a role. The status of the ware and its symbolic connotations may also have led to its use for export.

Many questions remain unanswered and, sadly, will not be answered until it is possible to return to fieldwork in southern Iraq. A well-stratified sequence with good radiocarbon dates would solve many of our problems and might also help us to understand better the relationship between Susiana and south Mesopotamia at this time, and even possibly allow us to determine the direction in which the influences were traveling. We also need to look at the reasons for the effective absence of Hajji Muhammad pottery in north Mesopotamia. Finally, if our pottery has no independent chronological existence, it must mean that Ubaid 1 on the one hand, and Ubaid 3 on the other, had a longer life than previously thought and that the rate of change was therefore slower than is currently accepted.

As long ago as 1986, Hans Nissen wrote that in the early days of Mesopotamian archaeology, "… any difference observable in the archaeological record, be it in architecture in technology or in art was interpreted chronologically even if in many cases such interpretation could be supported neither stratigraphically nor typologically" (Nissen 1986: 16). Thanks in part to his work, we now have a wider range of interpretative models on which to draw, models which include place, purpose, and agency as possible "prime movers." Place and purpose seem to be the most useful factors in attempting to understand the presence of the Hajji Muhammad-style pottery with which this paper is concerned. Our conclusions can only be tentative until we have high-quality new evidence from Mesopotamia, something that looks an increasingly distant prospect due to the present desperate situation in that country.

ACKNOWLEDGMENTS

I would like to thank Rob Carter and Graham Philip for their invitation to speak at the conference at which this paper was first given, and the anonymous reviewer for his meticulous comments.

BIBLIOGRAPHY

Calvet, Yves

1987a "L'apport de Tell el-'Oueili a la chronologie d'Obeid." In *Chronologies du Proche Orient / Chronologies in the Near East: Relative Chronologies and Absolute Chronology, 16,000–4,000 B.P.* (C.N.R.S. International Symposium, Lyon (France) 24–28 November 1986), edited by O. Aurenche, J. Evin, and F. Hours, pp. 465–72. British Archaeological Reports International Series 379(ii). Oxford: British Archaeological Reports.

1987b "Le sondage X36 de Tell el 'Oueili." In *Larsa et Oueili 1983*, edited by J.-L. Huot, pp. 33–94. Paris: Éditions recherches sur les civilisations.

Carter, Robert A.

2006 "Boat Remains and Maritime Trade in the Persian Gulf during 6th and 5th Millennia B.C." *Antiquity* 80: 52–63.

Carter, Robert A., and Harriet Crawford, editors

Forthcoming *Maritime Interactions in the Arabian Neolithic: The Evidence from H3, As-Sabiyah, an Ubaid-related Site in Kuwait*. American School of Prehistoric Research Monographs, Harvard. Boston: Brill.

oi.uchicago.edu

Dietler, Michael, and Brian Hayden, editors

2001 *Feasts: Archaeological and Ethnographic Perspectives on Food, Politics, and Power*. Smithsonian Series in Archaeological Inquiry. Washington, D.C.: Smithsonian Institution Press.

Dollfus, Genevieve

1983a "Tell Bendebal." *Cahiers de la délégation archéologique française en Iran*: 133–275.

1983b "Tell Djowi." *Cahiers de la délégation archéologique française en Iran*: 13–131.

Fujii, H., editor

1981 "Preliminary Report of Excavations at Gubba and Songor." *Al-Rāfidān* 2: 131–241.

Gibson, McGuire, and Augusta McMahon

1995 "Investigation of the Early Dynastic-Akkadian Transition." *Iraq* 57: 1–40

Hole, Frank, editor

1987 *The Archaeology of Western Iran: Settlement and Society from Prehistory to the Islamic Conquest*. Smithsonian Series in Archaeological Inquiry. Washington, D.C.: Smithsonian Institution Press.

Jasim, Sabah A.

1985 *The Ubaid Period in Iraq*. 2 vols. British Archaeological Reports, International Series 267. Oxford: British Archaeological Reports

Masry, Abdullah Hassan

1997 *Prehistory in Northeastern Arabia: The Problem of Interregional Interaction*. 2nd edition. London and New York: Kegan Paul International.

Matsumoto, Ken

1987 "The Samarra Period at Tell Songor A." In *Préhistoire de la Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du djebel Hamrin* (Colloque international du Centre National de la Recherche Scientifique, Paris 17–19 décembre 1984), edited by J.-L. Huot, pp. 189–99. Paris: Éditions du Centre National de la Recherche Scientifique.

Nissen, Hans J.

1986 "Introduction." In *Ğamdat Nasr: Period or Regional Style?* edited by U. Finkbeiner and W. Rollig, pp. 15–16. Wiesbaden: Ludwig Reichert.

Oates, Joan

1960 "Ur and Eridu, the Prehistory." *Iraq* 22: 32–50.

1983 "Ubaid Mesopotamia Reconsidered." In *The Hilly Flanks and Beyond: Essays in the Prehistory of Southwestern Asia Presented to Robert J. Braidwood, November l5, 1982*, edited by T. C. Young, P. E. L. Smith, and P. Mortensen, pp. 251–81. Studies in Ancient Oriental Civilization 36. Chicago: The Oriental Institute.

1987a "'Ubaid Chronology." In *Chronologies du Proche Orient / Chronologies in the Near East: Relative Chronologies and Absolute Chronology, 16,000–4,000 B.P.* (C.N.R.S. International Symposium, Lyon (France) 24–28 November 1986), edited by O. Aurenche, J. Evin, and F. Hours, pp. 473–82. British Archaeological Reports International Series 379(ii). Oxford: British Archaeological Reports.

1987b "A Note on 'Ubaid and Mitanni Pottery from Tell Braq." *Iraq* 49: 193–98.

Oates Joan; T. E. Davidson; D. Kamilli; and H. McKerrel

1977 "Seafaring Merchants of Ur?" *Antiquity* 51: 221–34.

Safar, Fuad; Mohamed A. Mustafa; and Seton Lloyd

1981 *Eridu*. Baghdad: Ministry of Culture and Information.

Stronach, David

1961 "Excavations at Ras al 'Amiya." *Iraq* 23: 95–137.

Ziegler, Charlotte

1953 *Die Keramik von der Qal'a des Haggi Mohammed*. Ausgrabungen der Deutschen Forschungsgemeinschaft in Uruk-Warka 5. Berlin: Gebruder Mann.

oi.uchicago.edu

12

THE DEVELOPMENT OF WOOL EXPLOITATION IN UBAID-PERIOD SETTLEMENTS OF NORTH MESOPOTAMIA

HIROSHI SUDO, *Okayama Orient Museum*

INTRODUCTION

Cuneiform texts in the second millennium B.C. indicate that woollen textiles were important exports from Mesopotamia to more northerly areas, and Algaze (1993) has suggested that a similar situation might have existed in the fourth millennium B.C. If this was the case, it would be useful to examine the development of wool production subsequent to the domestication of caprines. However, the study of the exploitation of fibers in prehistory is rendered difficult because of the lack of evidence. In this paper, I focus on chronological changes detectable in the spindle whorls from two Ubaid sites, Tell Kosak Shamali, in northern Syria, and Telul eth-Thalathat II, in northern Iraq. I aim to show that these changes might relate to the development of wool production in that period. As spindle whorls are common finds and will have been excavated at most archaeological sites dating to any particular period, their analysis provides a good means of investigating fiber exploitation in the prehistoric Near East.

THE ORIGINS OF WOOL PRODUCTION

Recent studies suggest that the domestication of sheep/goats began around the ninth millennium B.C. (Peters, von den Driesch, and Helmer 2005). Since Sherratt's (1981, 1983) proposal of a historical model for the evolution of animal husbandry in the Near East, caprine domestication has been generally considered to be connected primarily to the procurement of meat. He argued that secondary production (of milk and wool in the case of caprines) was developed some time after initial domestication. In fact, evidence for secondary production before the fifth millennium B.C. is sparse. However, recent archaeozoological studies emphasize not only subsistence, but also the social and symbolic aspects of animal domestication (Helmer, Gourichon, and Stordeur 2004). Recently, however, it has been argued (Vigne and Helmer in press) that secondary production, especially of milk, was significant from an early stage in caprine domestication. From this standpoint, a secure meat supply necessitates a fairly large herd because the fecundity of caprines is relatively low (normally one or two kids a year per female), and it is questionable whether people kept sufficient numbers of sheep and goats during the early stages of domestication to support significant levels of meat consumption (Miyake 1999: 62–63). Milk might, therefore, have offered a more stable animal resource at this stage.

However, the exploitation of wool, another secondary product, seems to have begun later than exploitation of milk for a number of reasons. First, a wool-bearing sheep, of the kind familiar today, was not developed early in the sequence of caprine domestication. Wild or early domesticated sheep would have borne bristly hair and kemp. The soft, fine fleece suitable for the production of fiber and which is today called wool was originally a layer that occurred beneath the hairy outer coat borne by wild or early domesticated sheep, and it would have been visible only during the molting season. Zeuner (1963) argued that it was probable that molted fleece was utilized as a resource for fiber, and that past populations could have applied to it the techniques already familiar from the production of linen. However, fleece from molting would have constituted a limited resource even if useful for textile products.

oi.uchicago.edu

The production of woollen textiles depended upon the selection of wool-bearing sheep with a lengthened fleece (wool staple), a development that post-dates initial domestication of sheep (Sherratt 1983; Reed 1960: 137). According to Ryder, the emergence of wool-bearing sheep would have taken many generations of breeding, and fully developed wool-bearing sheep occurred only by the Iron Age, although hair and kemps would have become thinner during the Bronze Age (Ryder 1993). Ryder's model of the development of wool-bearing sheep is suggestive when we come to consider the spindle whorl data from Ubaid sites (see below).

Some categories of evidence pertaining to wool exploitation increase after the Chalcolithic period, or fifth millennium B.C. Among the archaeological evidence, a clay animal figurine excavated at Tepe Sarab, in western Iran, and dated around 5000 B.C. is usually cited as the earliest evidence of wool-bearing sheep (Ryder 1993). V-shaped incisions on its side may indicate crimp wool, although this might represent no more than very simple decoration.

Archaeozoological data point to a greater emphasis on the exploitation of wool-bearing sheep after the Chalcolithic period. Herd structures vary according to the management strategy adopted to maximize yields of either meat, milk, or wool (Payne 1973). If a herd is managed for wool, it should feature relatively high numbers of fully mature animals, while sheep should become more abundant than goats, because goats, unlike sheep, did not develop soft wool.[1] On the basis of the faunal evidence from the Kermanshah Valley in western Iran (the location of Tepe Sarab), Davis (1984, 1993) concluded that the exploitation of secondary products from sheep and goats increased in importance after the fifth millennium B.C. Wool-bearing sheep are generally considered to be large and robust in order to support a heavy coat, and to therefore be identifiable in the morphology of excavated bones. Late Uruk sites in both Iran and Syria have provided evidence for large, presumably wool-bearing, sheep (Davis 1984; McCorriston 1997; Zeder 1994). In addition, references to wool-bearing sheep appear in Archaic texts from Uruk that are dated around 3000 B.C. In one text, "wool sheep" were clearly distinguished from other varieties (Green 1980: 4). It is, therefore, quite possible that wool-bearing sheep occurred widely at a rather earlier date.

Finally, I would like to mention methods of wool collection, as this may relate to the previous discussion. Tabular scrapers are large retouched flakes showing intentional retention of cortex on virtually the entire dorsal surface. They first appeared at the end of the Neolithic period and became more common through the Chalcolithic and Early Bronze Age, especially in the areas of the Levantine arid zone such as Sinai and the Negev (Rosen 1997). Their exact function is uncertain, although butchering knives would appear the most plausible explanation (Rosen 1997: 74–75). However, Henry (1995: 372–73) has used experimental studies to suggest that tabular scrapers might also have been used as wool-shearing knives. Whatever the case, their geographical distribution suggests that tabular scrapers were in some way associated with livestock raising, perhaps by pastoral groups. In early times, the fleece of sheep was plucked during the spring molting season (Ryder 1968: 77), whereas in more recent times wool has been collected by shearing using specialized tools[2] (Ochsenschlager 1993: pl. 3). Plucking is claimed to have provided more fine wool, and mixed with less hair and kemp, than does shearing (Barber 1991: 29). Tabular scrapers seem likely to be more useful for plucking, although they could have been used for shearing as well. If we accept the idea that the tabular scraper was a wool-harvesting tool, then its appearance in the later Neolithic period might suggest that wool exploitation began then, while the growing frequency and more extensive distribution of these tools in northern Syria during the fourth millennium B.C. might suggest that the wider economic importance of wool arose in this period.

In sum, various forms of evidence for wool production can be documented a short time after the fifth millennium B.C. This appears to correspond to Ryder's model of the gradual development of wool-bearing sheep. Thus we can suggest that the Chalcolithic period must have been a critical point for the development of wool production, although it is possible that wool was used to some extent during earlier stages of animal domestication. At present it is most probable that wool production started to become more intensive after the Chalcolithic period. On the basis of analogies with later periods, Algaze (1993) has suggested that woollen textiles may have been an important export from southern Mesopotamia to the north during the Uruk expansion of the fourth millennium B.C. In light of these arguments, it is worth examining the evidence for developments relating to wool production during the preceding Ubaid period.

---

[1] With the exception of the Angora goat, which produces mohair and appeared in Turkey after the medieval period. The fleece of Cashmere goats is also composed of high-grade fiber, but this comes from a layer under the outer coat and is plucked during the spring molt.

[2] The invention of efficient shears did not precede the Iron Age, when iron became widely available and fully wool-bearing sheep had developed (Ryder 1993: 14).

oi.uchicago.edu

The following sections examine the archaeological evidence potentially related to the exploitation of wool at two Ubaid sites, Tell Kosak Shamali, in northern Syria, and Telul eth-Thalathat II, in northern Iraq. Particular attention is paid to the chronological development of spindle whorls, as this may well be directly related to developments in wool production.

TELL KOSAK SHAMALI

Tell Kosak Shamali is a small site located on the eastern bank of the Upper Euphrates in northern Syria, around 40 km south of the border with Turkey. Excavation was carried out between 1994 and 1997 by the University of Tokyo (Nishiaki and Matsutani 2001, 2003). Two excavation areas, called sectors A and B (fig. 12.1), revealed thick cultural deposits that date to the northern Ubaid period with well-stratified materials recovered in and around a series of well-preserved Ubaid buildings. Remains from the Ceramic Neolithic and Middle Uruk periods were also encountered. Table 12.1 shows the chronological sequence of deposits in the two areas. The building levels were divided into six periods on the basis of ceramic analysis (Nishiaki et al. 1999), with some periods further divided into sub-phases. I deal here with the materials post-dating the Neolithic levels

Sector A, on the southern slope of the tell, produced well-preserved buildings from several levels, but especially from level 10, which is dated to the later "Early Northern Ubaid" period. A building recovered from this level featured a large room in which more than 150 complete vessels were found in situ along with a quantity potters' tools. One of the main features of sector B on the southeastern slope, was a pottery workshop that included two well-preserved kilns from levels 5–6 dated to the post-Ubaid period.

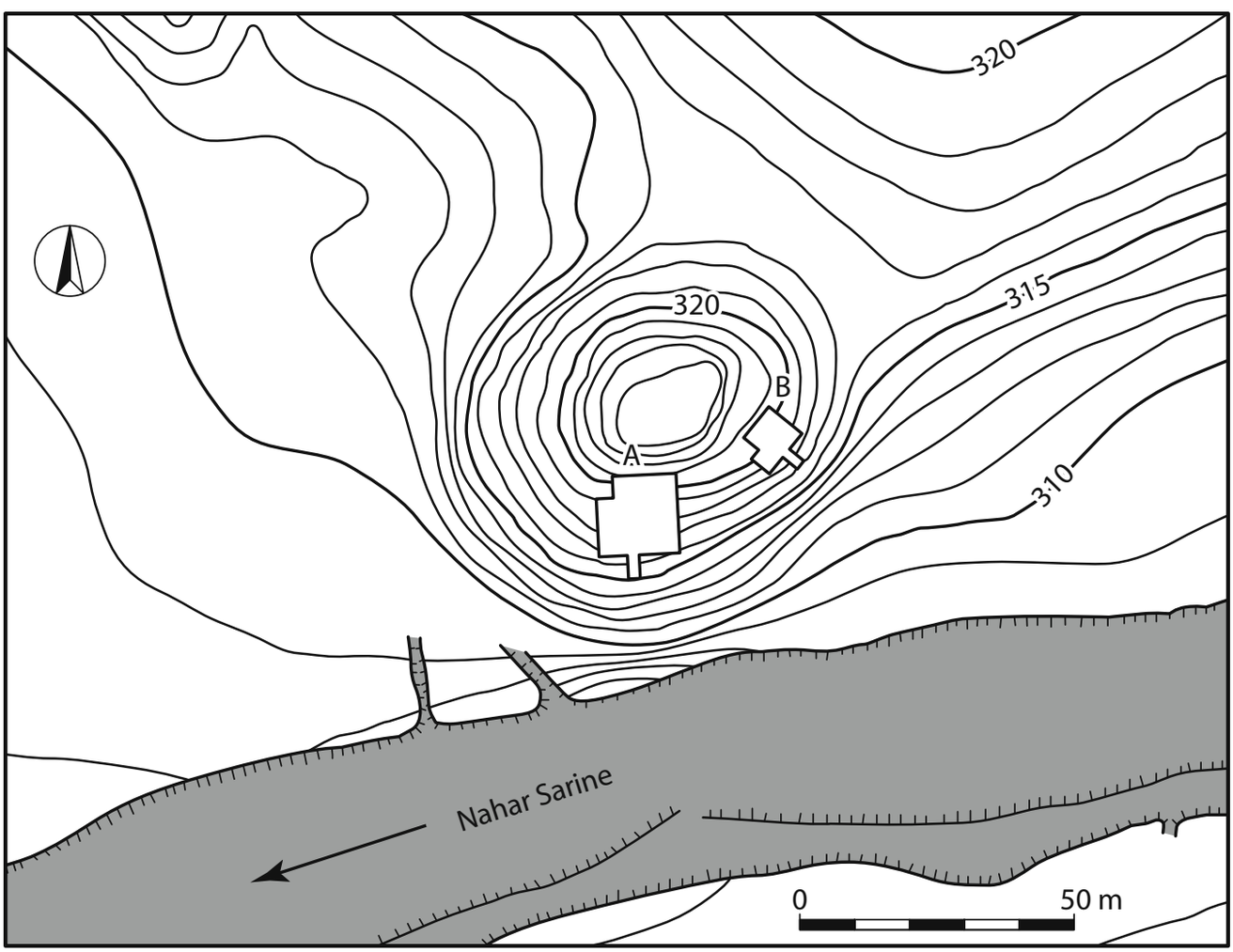


Figure 12.1. Topographic plan of Tell Kosak Shamali showing excavation areas

oi.uchicago.edu

Table 12.1. Stratigraphy of Tell Kosak Shamali and Telul eth-Thalathat II

Period		KSL A	KSL B	Thalathat II
Middle Uruk	late		Level 1 Level 2	
	early		Level 3 Level 4	
Post Ubaid / Gawra 5,700 B.P. / 4500 B.C.			Level 5 Level 6	Levels I–VI
Terminal Ubaid		Level 1 Level 2 Level 3	Level 7	Level VIIa
Late Northern Ubaid	late	Level 4 Level 5 Level 6		Levels VIIb–XI
	early	Level 7 Level 8 Level 9		
6,100 B.P. / 5000 B.C.				
Early Northern Ubaid	late	Level 10 Level 11 Level 12		
	early	Level 13 Level 14 Level 15 Level 16 Level 17		Levels XII–XIV
Halaf ?				
Pottery Neolithic		Level 18	Level 8	Levels XV–XVI

EVIDENCE FOR WOOL PRODUCTION AT TELL KOSAK SHAMALI

In this section I examine types of material that were probably related to fiber production at the site. As no other site has such a long sequence of Chalcolithic occupation, the analysis of materials over such a long sequence should allow an examination of the development of Chalcolithic wool production, even if most of the evidence is indirect. The huge amount of archaeological material from the site includes evidence relating to fiber production, such as spindle whorls, pierced beads/pendants and seals, clay scrapers, and a clay sealing bearing evidence of a rope impression.

Fourteen beads/pendants were recovered from Kosak Shamali. These were grouped into four types according to the number and position of perforations (Sudo 2003: 244–45). The perforation on these beads/pendants ranges from 1 to 6 mm in diameter, the average value being 2 mm. Three stamp seals from the site also reveal perforations (Sudo 2003: 238–41). In this case, the diameters range between 2 mm and 4 mm. The diameter of the perforations on beads/pendants and stamp seals is of importance because this can provide an indication of the thickness of the thread employed for their suspension when these were strung on a necklace or some other such ornament.

The idea that tabular flint scrapers may have had some connection with wool-harvesting tools has already been mentioned. In addition, I have reported elsewhere (Sudo 2003: 225) the existence for "clay scrapers" at Kosak Shamali, with some of these taking the form of reused potsherds that have been retouched to create a semicircular or fan shape with a sharp edge resembling that of flint tabular scrapers. Similar artifacts were reported from Chogha Mish, Iran, where the excavators argued that such "clay scrapers" acted as a cheap substitute for genuine flint products (Delougaz and Kantor 1996: 109). However, more research is required before we can determine a definite function for these items.

The next piece of evidence for consideration is the presence of rope or cord impressions on the back of a clay sealing (fig. 12.2). These allow us to establish both the thickness of the cord and the direction in which the fiber had been spun, thus giving a clue as to the material from which the fiber was made. The sealing was excavated from level 4 of sector B at Kosak Shamali, which is dated to the Middle Uruk period. On the obverse it bears two impressions made by the same stamp seal; the impression shows a number of short lines that run diagonally toward two larger lines, which intersect at right angles. Three cord impressions are evident on the reverse, and the sealing is interpreted as having secured cords running around the shoulder of a jar (Sudo 2003: 240, fig. 15.16.1).

oi.uchicago.edu

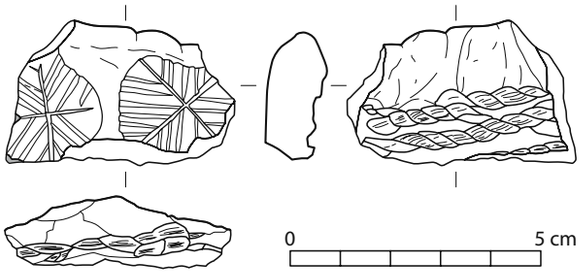


Figure 12.2. A clay sealing from Tell Kosak Shamali showing evidence of cord impressions on the reverse

Natural fibers have a particular direction of twist. Flax fibers twist in the S (left) direction, but cotton and hemp twist in the Z (right) direction. Such fibers are generally spun in the direction taken by their natural twist. Wool has a vectorless crimp and thus can be spun equally well in either direction (Barber 1991: 66). However, wool products are usually spun in the Z direction (Barber 1991: 66; Duistermaat 1996: 347–48). Barber attributes this to the fact that 90 percent of the human population is right handed, and when a right-handed person spins fiber by the drop-spinning process, the right hand holds the mass of fiber, and the left hand rotates the spindle. The result is that the fiber is spun into yarn in the Z direction (Barber 1991: 67). From the rope impressions, we can see that two threads spun in the Z direction are plied together with another spun in the S direction.[3] According to the above discussion, the rope may have been produced from wool spun by a right-handed person using the drop-spinning technique. However, it is not possible to be certain, because there would always be some exceptions to this (Barber 1991: 68). Impressions of textiles and cord on pottery and clay objects have been reported from the other sites (Fukai and Matsutani 1981: pls. 45–29, 45–30; Matsutani 1991: 35), and further research on such impressions might help to determine the choice of materials for fiber in the prehistoric period. However, while the categories of evidence above confirm the exploitation of fiber, the data remain fragmentary.

In the next section I consider the final two categories of evidence: spindle whorls and faunal remains. When analyzed chronologically, these data are suggestive of the development of wool production at Kosak Shamali and Telul eth-Thalathat II.

THE SPINDLE WHORLS FROM TELL KOSAK SHAMALI

I begin with a brief discussion of spindle whorls following the studies of Barber (1991) and Keith (1998). The spindle whorl is essentially a perforated weight mounted at one end of a wooden spindle, around which fiber is spun. When fiber is twisted to form yarn by drop-spinning (the most popular technique), the weight and diameter of the whorl are the most important factors. The weight of the whorl provides the tension and inertial spin to the thread, which is pulled from the mass of fiber during drop-spinning. The appropriate weight of the spindle varies according to the characteristics of the material being spun and the desired product.

When a worker spins fine or soft fiber such as wool into fine yarn, a heavy spindle would tear the stretched fiber before it is spun. However, heavy or hard fibers, such as flax, cannot be spun effectively using a light spindle because its rotation has insufficient power. Thus, for the following analysis I make the assumption that a lighter spindle is suitable for spinning finer fibers and for creating fine yarns, and so the weights of the spindle whorls recovered should be broadly indicative of the different types of thread and/or fiber that were being produced in different regions and at different times (Barber 1991: 52).

At Tell Kosak Shamali, twenty-five spindle whorls were collected from well-stratified deposits spanning the Early Northern Ubaid through to the Middle Uruk periods. These were of two forms, biconical and disc shaped. The disc-shaped whorls were made from potsherds and show only minor variations in shape and decoration when compared to examples from other sites (Sudo 2003). Weights range from 9 to 47 grams. On the basis of ethnographic

[3] The direction of spinning and plying appearing in the impressions is the opposite of that actually used.

oi.uchicago.edu

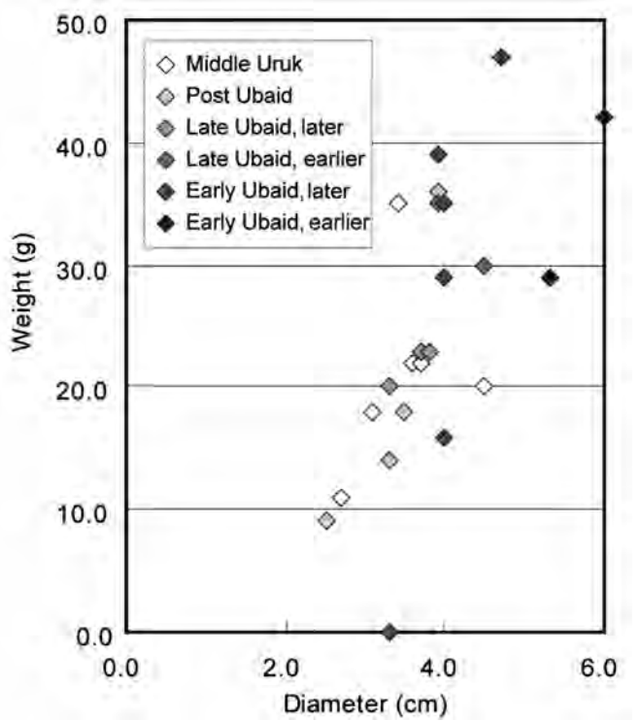


Figure 12.3. The weights and diameters of spindle whorls from Tell Kosak Shamali

data (Barber 1991: 52) — with the exception of one exceptionally large and heavy piece that weighed 162 g — most whorls seem to have been used for spinning wool; the heavy one may have been used for flax.

Next, I examine those whorls falling in the range 9–47 g in detail. The distribution of weight and diameter (fig. 12.3) suggests that the whorls can be divided into two categories: weights less than 25 g and those greater than 25 g. Consideration of the distribution of whorls by period (from Early Ubaid to Middle Uruk; there was an absence of whorls from the Terminal Ubaid levels) shows that whorls weighing less than 25 g became more frequent after the later phase of the Late Ubaid period. Figure 12.4 shows that the proportion of whorls falling in the lightest weight category increases over time, while figure 12.5 confirms that the average weight of the whorls from each phase declines during the Late Ubaid. However, the pattern of change is gradual rather than abrupt.

Given the previous discussion, it seems reasonable to suggest that the decreasing weight of whorls over time reflects a gradual shift toward the spinning of finer-quality or softer fibers during the Chalcolithic-period occupation at Tell Kosak Shamali.

Evidence for the exploitation of secondary products at Tell Kosak Shamali is also provided by the archaeozoological data (Gourichon and Helmer 2003). The caprines identified are all domesticated, with both sheep (*Ovis aries*) and goat (*Capra hircus*) present. These are the main taxa identified within the faunal assemblage and constitute more than 50 percent of the total number of specimens identified for each period. In the Early Ubaid period, the data point to a predominance of caprines aged two years or less, although some older animals were present. This age structure indicates that caprines were exploited mainly as a tender-meat resource with perhaps some emphasis on secondary products. During the Late and post-Ubaid periods, the exploitation of caprines for milk becomes evident, with a slaughter pattern that includes numbers of older females. In the Uruk period the livestock husbandry seems to have been focused on the exploitation of milk and wool, with a high frequency of older animals. It is suggested that the high proportion of goats to sheep indicates a strategy focused on dairy products in the case of caprines and tender meat in the case of ovis. However, the evidence of the spindle whorls raises the possibility that the exploitation of wool also increased. A growing interest in secondary products at Tell Kosak Shamali through the Chalcolithic period might have led to improvements in the quality of wool, as suggested by Ryder's model, in which case the decreasing weight of spindle whorls might reflect the changing quality of the resulting fiber.

oi.uchicago.edu

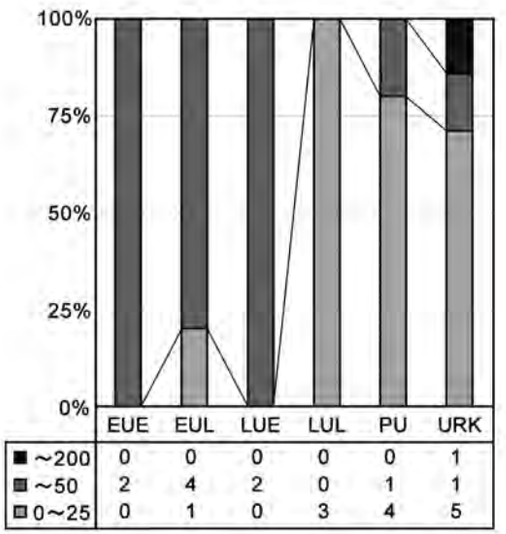


Figure 12.4. Frequency of spindle whorls in each weight category from Tell Kosak Shamali

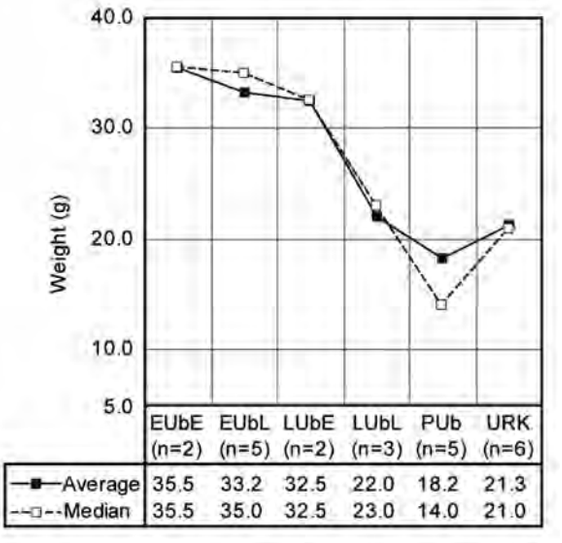


Figure 12.5. Changing weight of spindle whorls from Tell Kosak Shamali

THE SPINDLE WHORLS FROM TELUL ETH-THALATHAT II

As the size of the sample of whorls from Tell Kosak Shamali is small, it would be useful to examine the evidence from other relevant sites, and so I have also studied the material from the Chalcolithic site of Telul eth-Thalathat II, in northern Iraq. The sequence at this site spans essentially the same periods as are present at Kosak Shamali (table 12.1). However, many more spindle whorls were excavated at Thalathat II during the excavation seasons of 1956, 1957, and 1964 (Egami 1958; Fukai, Horiuchi, and Matsutani 1970) than were recovered from Kosak Shamali; 107 examples are currently stored at The University Museum, The University of Tokyo. We can identify the find-levels of fourty-five examples, and these can be divided into four phases: Early Ubaid, Late Ubaid, Terminal Ubaid, and the Gawra period. The data from Telul eth-Thalathat II also reveal a decrease in the weight of spindle whorls over time (figs. 12.6–7). Unfortunately, detailed faunal studies have not yet been undertaken, although these are anticipated.

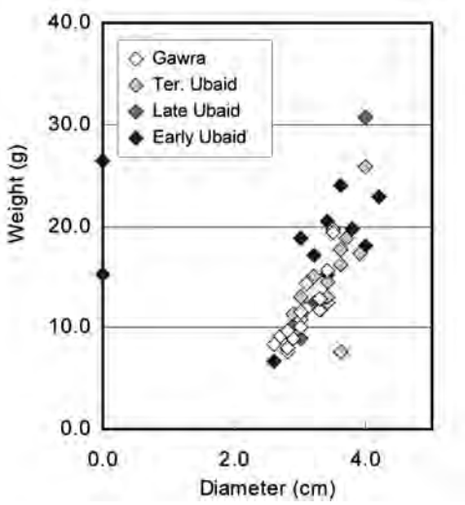


Figure 12.6. The weights and diameters of spindle whorls from Telul eth-Thalathat II

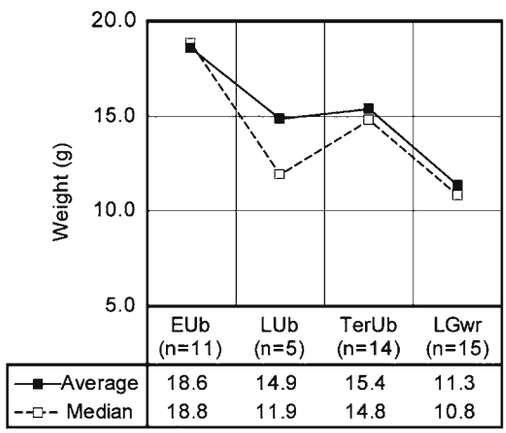


Figure 12.7. Changing weight of spindle whorls from Telul eth-Thalathat II over time

oi.uchicago.edu

The site of Tepe Gawra, also in northern Iraq, yielded hundreds of spindle whorls from the Chalcolithic levels XII–VIII. However, while data on the diameter and thickness of 235 examples are available from a recent publication (Rothman 2002), the weights themselves are not. An analysis using dimensions as a proxy for weight was undertaken, but this proved inconclusive.

Although the sample size is small and more research is required to investigate these patterns more generally, two Chalcolithic sites in north Syria/north Mesopotamia have revealed a similar pattern of decreasing weight of spindle whorls during the fifth and fourth millennia B.C., a factor that I have suggested should be linked to increasing exploitation of wool in the Chalcolithic.

CONCLUSION

As noted at the start of this paper, archaeozoologists have identified wool-bearing sheep morphologically from excavated animal bones in fourth-millennium B.C. contexts, while by the third millennium B.C. the existence of wool-bearing sheep is clearly documented in early clay tablets. It is possible that, as may be the case for milk, wool was exploited from an early point in the domestication of sheep and goats. Thus the evidence presented here, which argues for a growing emphasis upon the exploitation of wool during the fifth millennium B.C., seems to correspond to Ryder's model of a gradual increase in the raising and exploitation of wool-bearing sheep in the fifth and early fourth millennia B.C.

McCorriston (1997) has argued that the major shift from the use of flax to that of sheep's wool caused significant economic and social transformations and an accompanying reorganization of land exploitation, patterns of ownership, labor roles, and social relationships, all of which were germane to the development of complex societies during fouth and third millennia B.C. The two sites that are examined here both date to the fifth millennium B.C., a key transitional period on the way toward complex urban societies. In light of McCorriston's comments, the possibility of a change in the manner and scale in which wool was exploited during the fifth millennium B.C. is likely to be an important issue. At present, we cannot extrapolate on the basis of the evidence from Tell Kosak Shamali and Telul eth-Thalathat alone to the Chalcolithic Near East generally, as it is possible that these developments represent a phenomenon particular to these two sites. That said, comparative examination of the materials from other sites would provide an opportunity to use a wider range of evidence to investigate the development of wool production in the Near East during the Chalcolithic period.

ACKNOWLEDGMENTS

I wish to express my gratitude to Yoshihiro Nishiaki, of the University Museum, the University of Tokyo, for providing me with the opportunity to join the excavation at Tell Kosak Shamali and to study the materials from the site and from Telul eth-Thalathat. Thanks are also due to Marc Verhoeven for advice on my conference presentation, and to Kazuya Shimogama for providing information on the stratigraphy of Telul eth-Thalathat.

BIBLIOGRAPHY

Algaze, Guillermo

1993 *The Uruk World System: The Dynamics of Expansion of Early Mesopotamian Civilization*. Chicago: University of Chicago Press.

Barber, E. J. W.

1991 *Prehistoric Textiles: The Development of Cloth in the Neolithic and Bronze Ages with Special Reference to the Aegean*. Princeton: Princeton University Press.

oi.uchicago.edu

Davis, S. J. M.

1984 "The Advent of Milk and Wool Production in Western Iran: Some Speculations." In *Animals and Archaeology* 3: *Early Herders and Their Flocks*, edited by J. Clutton-Brock and C. Grigson, pp. 265–78. British Archaeological Reports, International Series 202. Oxford: British Archaeological Reports.

1993 "The Zoo-archaeology of Sheep and Goat in Mesopotamia." *Bulletin on Sumerian Agriculture* 7: 1–7.

Delougaz, Pinhas, and Helene J. Kantor

1996 *Chogha Mish* 1: *The First Five Seasons of Excavations, 1961–1971*. Oriental Institute Publications 101. Chicago: Oriental Institute.

Duistermaat, K.

1996 "The Seals and Sealings." In *Tell Sabi Abyad, the Late Neolithic Settlement: Report on the Excavations of the University of Amsterdam (1998) and the National Museum of Antiquities Leiden (1991–1993) in Syria*, Volume 2, edited by P. M. M. G. Akkermans, pp. 339–401. Leiden: Nederlands Historisch-Archaeologisch Instituut te Istanbul.

Egami, Namio, editor

1958 *Telul eth Thalathat* 1: *The Excavation of Tell II: The First and Second Season (1956–1957)*. Tokyo University Iraq-Iran Archaeological Expedition, Report 1. Tokyo: Institute of Oriental Culture, University of Tokyo.

Fukai, Shinji; Kiyoharu Horiuchi; and Toshio Matsutani

1970 *Telul eth Thalathat* 2: *The Excavation of Tell II; The Third Season (1964)*. Tokyo University Iraq-Iran Archaeological Expedition, Report 12. Tokyo: Yamakawa.

Fukai, Shinji, and Toshio Matsutani

1981 *Telul eth Thalathat* 4: *The Excavation of Tell II; The Fifth Season (1976)*. Volume 4. Tokyo University Iraq-Iran Archaeological Expedition, Report 17. Tokyo: Institute of Oriental Culture, University of Tokyo.

Gourichon, L., and D. Helmer

2003 "Preliminary Analysis of the Faunal Remains from Tell Kosak Shamali (Syria): Squares AD5, AE5, AF5, BD6, and BE6." In *Tell Kosak Shamali, The Archaeological Investigations on the Upper Euphrates, Syria* 2: *The Chalcolithic Technology and Subsistence*, edited by Y. Nishiaki and T. Matsutani, pp. 273–82. University Museum, the University of Tokyo Monograph 2. Tokyo: The University Museum, University of Tokyo; Oxford: Oxbow Books.

Green, M. W.

1980 "Animal Husbandry at Uruk in the Archaic Period." *Journal of Near Eastern Studies* 39: 1–35.

Helmer, D.; L. Gourichon; and D. Stordeur

2004 "A l'aube de la domestication animale: Imaginaire et symbolisme animal dans les première sociétés néolithiques du nord du Proche-Orient." *Anthropozoologica* 39: 143–63.

Henry, Donald O.

1995 *Prehistoric Cultural Ecology and Evolution: Insights from Southern Jordan*. Interdisciplinary Contributions to Archaeology. New York: Plenum.

Keith, K.

1998 "Spindle Whorls, Gender, and Ethnicity at Late Chalcolithic Hacınebi Tepe." *Journal of Field Archaeology* 25: 497–515.

Matsutani, Toshio, editor

1991 *Tell Kashkashok: The Excavations at Tell No. II*. Tokyo: University of Tokyo Press.

McCorriston, Joy

1997 "The Fiber Revolution: Textile Extensification, Alienation, and Social Stratification in Ancient Mesopotamia." *Current Anthropology* 38: 517–49.

Miyake, Y.

1999 "The Walking Account: Development of Animal Domestication and Diary Product in Western Asia." In *Archaeology of Food Producing Society*, edited by A. Tsuneki, pp. 50–71. Tokyo: Asakura. [In Japanese]

oi.uchicago.edu

Nishiaki, Yoshihiro; Tatsundo Koizumi; M. Le Mière; and T. Oguchi

1999 "Prehistoric Occupations at Tell Kosak Shamali, the Upper Euphrates, Syria." *Akkadica* 113: 13–68.

Nishiaki, Yoshihiro, and Toshio Matsutani, editors

2001 *Tell Kosak Shamali: The Archaeological Investigations on the Upper Euphrates, Syria* 1: *Chalcolithic Architecture and the Earlier Prehistoric Remains*. University Museum, the University of Tokyo Monograph 1. Tokyo: The University Museum, University of Tokyo; Oxford: Oxbow Books.

2003 *Tell Kosak Shamali: The Archaeological Investigations on the Upper Euphrates, Syria* 2: *The Chalcolithic Technology and Subsistence*. University Museum, the University of Tokyo Monograph 2. Tokyo: The University Museum, University of Tokyo; Oxford: Oxbow Books.

Ochsenschlager, E. L.

1993 "Village Weavers: Ethnoarchaeology at al-Hiba." *Bulletin on Sumerian Agriculture* 7: 43–62.

Payne, S.

1973 "Kill-off Patterns in Sheep and Goats: The Mandibles from Aşvan Kale." *Anatolian Studies* 23: 281–303.

Peters, Joris; Angela von den Driesch; and Daniel Helmer

2005 "The Upper Euphrates-Tigris Basin: Cradle of Agro-pastoralism?" In *The First Steps of Animal Domestication: New Archaeozoological Techniques* (Proceedings of the 9th Conference of the International Council of Archaeozoology, Durham, August 2002), edited by J.-D. Vigne, J. Peters, and D. Helmer, pp. 96–124. Oxford: Oxbow Books.

Reed, C. A.

1960 "Review of the Archaeological Evidence on Animal Domestication in the Prehistoric Near East." In *Prehistoric Investigations in Iraqi Kurdistan*, edited by R. J. Braidwood and B. Howe, pp. 119–45. Studies in Ancient Oriental Civilization 31. Chicago: University of Chicago Press.

Rosen, S. A.

1997 *Lithics after the Stone Age: A Handbook of Stone Tools from the Levant*. Walnut Creek: AltaMira Press.

Rothman, Mitchell S.

2002 *Tepe Gawra: The Evolution of a Small, Prehistoric Center in Northern Iraq*. University Museum Monographs 112. Philadelphia: University of Pennsylvania, Museum of Archaeology and Anthropology.

Ryder, M. L.

1968 "The Origin of Spinning." *Textile History* 1: 73–82.

1984 "Sheep Representations, Written Records and Wool Measurements." In *Animals and Archaeology* 3. *Early Herders and Their Flocks*, edited by J. Clutton-Brock and C. Grigson, pp. 69–82. British Archaeological Reports, International Series 202. Oxford: British Archaeological Reports.

1993 "Sheep and Goat Husbandry with Particular Reference to Textile Fibre and Milk Production." *Bulletin on Sumerian Agriculture* 7: 9–32.

Sherratt, A.

1981 "Plough and Pastoralism: Aspects of the Secondary Products Revolution." In *Pattern of the Past: Studies in Honour of David Clarke*, edited by I. Hodder, G. Isaac, and N. Hammond, pp. 261–305. Cambridge: Cambridge University Press.

1983 "The Secondary Exploitation of Animals in the Old World." *World Archaeology* 15: 90–104.

Sudo, Hiroshi

2003 "The Chalcolithic Small Finds from Tell Kosak Shamali: Various Aspects of Village Activity." In *Tell Kosak Shamali,* Volume 2: *The Chalcolithic Technology and Subsistence*, edited by Y. Nishiaki and T. Matsutani, pp. 213–59. University Museum, the University of Tokyo Monograph 2. Tokyo: The University Museum, University of Tokyo; Oxford: Oxbow Books.

Vigne, J.-D., and D. Helmer

In press "Are the 'Secondary Products' All Secondary, Especially for the Birth of Old World Bovid Domestication?" *Anthropozoologica*.

oi.uchicago.edu

Zeder, N. A.

1994 "After the Revolution: Post-Neolithic Subsistence in Northern Mesopotamia." *American Anthropologist* 96: 97–126.

Zeuner, Frederick E.

1963 *A History of Domesticated Animals*. New York: Harper & Row.

oi.uchicago.edu

13

UBAID LITHICS REVISITED: THEIR SIGNIFICANCE FOR THE INTERPRETATION OF UBAID SOCIETY

ELIZABETH HEALEY, *University of Manchester*

INTRODUCTION

Lithic assemblages consist of useful and sensitive artifacts with which to engage in the discussion of socioeconomic organization, relationships, and cultural change, both within a site as well as in the wider region (see, e.g., Gero 1989; Johnson 1996; Nassaney 1996; Edmonds 1995). Unfortunately, in many situations, and in Ubaid assemblages in particular, their potential has often been considerably undervalued. This is partly because many of the excavations were conducted in the 1930s when lithics, particularly undiagnostic ones, were not considered to convey much information — indeed, Mallowan described the flint and obsidian blades from Chagar Bazar as a "monotonous series" and continued, "I have no great hopes that a more detailed examination of the flints and obsidian will prove to be of any great value, but this task I am reserving for a sedentary old age, by which time perhaps, the much more important material from one or two other yet unpublished western Asiatic sties will have been properly dealt with" (Mallowan 1947: 245). At times, too, only the more attractive or "pretty" objects were collected (Kosłowski 1986: 282; Coqueugniot 1996: 289), while at complex sites, particularly from older excavations, their contextual integrity may be questionable. Further, their study is all too often eclipsed by more tractable objects such as architecture (Inizan 1987: 305), ceramics (Matthews 2003: 106), seals, tokens, figurines, and so on, which are perceived as carrying more overt symbolic information.

This study starts from the point of view that lithics are essential and active artifacts in the creation, maintenance, and signification of social identities (Nassaney 1996: 184; see also Wobst 1977; Hodder 1982). From this perspective, our present knowledge of lithics at selected sites with Ubaid occupation is reviewed, and questions such as access to raw materials, the type of objects being made, and how and where they were produced are considered. Where appropriate it draws on information from the recently excavated site of Kenan Tepe (Parker and Dodd 2005; Parker et al. 2006; Parker this volume).[1] The present survey does not purport to be comprehensive because of the nature of the evidence. Moreover, it is only broadly chronologically and geographically oriented, and the origins of Ubaid lithic traditions are not considered in any detail, although Nishiaki has discussed this for the northern Ubaid at Tell Kosak Shamali (Nishiaki 2003). Both Kenan Tepe and Kosak Shamali need further consideration as chronologies become better understood (Campbell this volume). Rather, the survey is intended to provide a starting point that, although it inevitably raises more questions than it answers, ideally demonstrates that lithics are very much integral to society and so are important for our interpretation and understanding of Ubaid material culture.

It ought to be said from the outset that the theoretical stance from which we understand material culture impacts not only on the interpretative possibilities but also on the way in which we study it.

As alluded to above, lithics are often categorized and treated merely as residues of human activity or cultural-historical markers, and they are mechanistically recorded in order to generate purportedly objective data. Rather, we should see tool manufacture as a social act (see, e.g., Pfaffenberger 1992; Lemonnier 1993; Edmonds 1995; Dobres 2000). Indeed, "the creation of technology, the form that it takes and the manner of its subsequent development, serve as powerful media through which people reproduce some of the basic categories of their social and material world. For that same reason making and using may also serve as a point of departure in the negotiation of new rela-

[1] I am grateful to Bradley Parker and Lynn Dodd for inviting me to examine the lithics from Kenan Tepe and for allowing me to use the interim data in this paper.

oi.uchicago.edu

tions and new meetings" (Edmonds 1990: 57). This does not excuse us from detailed analyses of assemblages (see also Johnson 1996: 171), but the attributes chosen for analysis must be relevant to their implication in the social world. The acquisition of raw materials, the manufacture and use of artifacts, and the method of their discard are part of the definition of social distinctions and boundaries, as well as being implicated in the reproduction and maintenance of social order.

In this overview I am working from the premise that Ubaid society consists of small, independent but not isolated, quasi-equalitarian communities that show long-term social stability and a large degree of self-sufficiency (Huot 1994; Stein 1994; Akkermans and Schwarz 2003). It has also been suggested that, at least in the north, there is much uniformity in production methods and that workmanship tends to be poor (Akkermans and Schwarz 2003: 168–69). If we accept that lithic artifacts, many of which are items of everyday use, are an integral part of such a social structure, then we might expect them also to be mundane and uninformative. However, it appears that this is unduly pessimistic, because where the material has been studied in detail, subtle changes due to both local evolution and the influence of outside traditions can be seen (Nishiaki 2003: 57). At Kenan Tepe, too, there are changes through time, particularly in the use of obsidian, which might be important in considering wider social relationships.

THE DATA

The data set from each site varies considerably in detail, sometimes amounting to little more than a passing reference to the presence of lithics. At other sites entire assemblages have been studied in detail and have produced large quantities of material (over 22,000 from the Ubaid levels at Tell Kosak Shamali [Nishiaki 2003: table 11.1], some 20,000 from Değirmentepe [Balkan-Atlı 1995: table 1], and several thousand from Tell Songor [Fujii 1981]). Most sites seem to have fewer than 1,000 artifacts: for example, though admittedly only a small sample was analyzed, Tell Kurdu has about 400; Kenan Tepe has about 1,000; and Tell Madhhur about 500. But overall quantity is neither here nor there if it lacks specific contextual detail, because we become guilty of "the collection of data in the hope that an answer will emerge" syndrome. Even if we are able to attribute artifacts to broad chronological horizons, it is often not possible to attribute them to an exact location (though there are a few notable exceptions), and we do not know whether they came from a floor or the fill of a room or a courtyard or are from a non-specific context, so this limits our understanding of their articulation in particular events. Broad themes are, however, often discussed, and thus we can consider questions like raw-material acquisition and the sort of things that are made.

The data consulted are summarized, with references, in tables 13.1–4.

oi.uchicago.edu

Table 13.1. Summary of occurrence of lithics at selected Ubaid sites

	Site	*Approximate Ubaid Phase (provisional)*	*Total Lithics*	*Percent Obsidian*	*General Comments*	*References*
Northern Levant	Tell Kurdu, Trench 14	Amuq E	403	6.20	Variety of flint, some local, some "imported." Locus 19 is an exterior rubbish deposit	Edens 2000a: table 5. Sample only
	Yumuktepe	Amuq E	unknown	more obsidian than flint	Mostly coarse-grained flint, sickles on fine-grained, no reduction sequence	Zambello 2004: 150; Brice in Garstang 1953: 127
	Ras Shamra IIIC	Amuq E	651	5.80	Much local chalk flint	de Contenson 1992: 82ff.
	Ras Shamra IIIB	Amuq E	962	16.80	Much local chalk flint. Tabular flint also used	de Contenson 1992: 85ff.
	El Rouj 4 (Tell Abd Aziz)	Ubaid	unknown	unknown	No information on Ubaid lithics. Four obsidian blades analyzed	Maeda 2003 (obsidian)
Upper Euphrates	Kosak Shamali, Sector A, levels 17–10	Early Northern Ubaid	10,395	0.90	Local for flakes and cores	Nishiaki 2003: table 11.1
	Kosak Shamali, Sector A, levels 9–4	Late Northern Ubaid	9,907	0.36	"Imported" for blades	Nishiaki 2003: table 11.1
	Kosak Shamali, Sector A, levels 3–1; Sector B, level 7	Terminal Northern Ubaid	1,914	0.30	—	Nishiaki 2003: table 11.1
	Tell al-'Abr	Northern Ubaid	no figures given	rare	River cobbles and other flint for blades	Hammade and Yamakazi 2006: 327–31
Balikh	Hammam et-Turkman	Northern Ubaid	?	?	No information on Ubaid lithics. Surface obsidian examined	Leenders in van Loon 1988
Keban	Değirmintepe, levels 6–11	Late Northern Ubaid	23,298	2.93	Essentially a flake industry on flint from river; good-quality flint for blades not knapped on site	Balkan-Atlı 1995
	Norşuntepe 40–37	Amuq E / Ubaid	1,342	75+	River flint and tabular flint used	Schmidt 1996
	Tülintepe	Amuq E / Ubaid?	no figures given	94	Raw materials found in the vicinity. Only detailed breakdown is from lithics in assemblage 23, Structure B	Arsebük 1974, 1983, 1986
Upper Tigris	Kenan Tepe	Early Northern Ubaid	1,145	23	n.b.: preliminary figures	Healey 2006; Healey in Parker et al. 2009
Northern Mesopotamia	Telul eth-Thalathat II, levels XIV–VIIb	Early Ubaid (level XIV) and Northern Ubaid (level XIII)	no figures given	20	Numerous blades and finished tools	Nishiaki 2003: 56; Fukai, Horiuchi, and Matsutani 1970
Khabur	Tell Madhhur	Late Northern Ubaid	515	9 (based on figures in Roaf 1989)	Local flint; 86% waste; hammerstones rare. Off-site blade production, plus pressure flaked. Pinkish gray pebbles preferred for sickles	Miller and Miller 1984
	Tell Mashnaqa	Early Northern Ubaid	8?	numerous	—	Monchambert 1984: 211
	Aqab	Ubaid	—	80	No specific information on Ubaid lithics. Flint of poor quality	Davidson and Watkins 1981: 11
Northern Mesopotamia	Tell Arpachiyah, TT 1–4	Ubaid 3	—	ca. 50?	No specific information on Ubaid lithics	Mallowan and Rose 1935
	Tepe Gawra XIX–XII	Early to Late Northern Ubaid	—	More than half (except stratum XVI, where 50%)	—	Tobler 1950: 200ff; Rothman 2002
	Yarim Tepe III	Early Northern Ubaid	?	?	Numerous flint and obsidian knifelike flakes and blades	Merpert and Munchaev 1993: 237
	Qalinj Agha	Northern Ubaid	?	ca. 75+	In rooms. Obsidian more numerous than flint	al-Soof 1966, 1969; al-Soof and es-Siwwani 1967
	Khanijdal E	Later Ubaid	?	?	Sickle blades mentioned. No other information	Wilkinson, Monahan, and Tucker 1996
Central Mesopotamia	Tell Abada	Ubaid 1–4	1,314	? 1	Possible off-site working; flint and obsidian found in most rooms	Bewley in Jasim 1985; Jasim 1985: 209–11
	Hassan 5a and 5b	Ubaid	—	11	—	Bulgarelli 1984, 1985
	Abu Husaini	Ubaid 3	—	very rare	Extensive industry. Large quantity of flint in room divided by wall	Tusa 1980: 225–27
	Kheit Qassim III	Ubaid 3	Many flint implements		Local flint. Percussion flaking within house, blade workshop outside; refuse dump room 6 under stairs	Forest-Foucault 1980: 221–27; Inizan 1987
Central Mesopotamia / Hamrin	al-Saadiya	Ubaid 3–4	overall totals not given	rare	Local, imported, and jasper. Blades reduced by pressure	Koslowski 1986
Central Mesopotamia	Choga Mami Ubaid well	Ubaid 3 ?	841	0.90	Flint and obsidian not separated by type	Mortensen 1973
	Songor B and C	Early Ubaid / Ubaid 3	3,640	0.77		Fujii 1981
	Ras al-Amiya	Ubaid 2/3	—	freely used	Flint and obsidian plentiful	Stronach 1961
Southern Mesopotamia	Eridu TS, XIX–VI	Ubaid 1–4	no figures given		—	Lloyd and Safar 1947, 1948
	Ur	Ubaid 1–4?	no figures given		—	Woolley 1929, 1930, 1932, 1934, 1955: 7–22
	'Oueili	Ubaid 1–4	no figures given	rare	Various, including rock crystal workshop	Inizan 1986; Inizan and Tixier 1981; Coqueugniot 1996
	al 'Ubaid	Ubaid 4?	618	43.40	Also used rock crystal (69 pieces), jasper, and blue feldspar	Hall and Woolley 1927: 50f
Gulf	as-Sabiyah	Ubaid 2, 3, and 4	7,000 to 8,000	less than 0.1	—	Carter and Crawford 2001; 2003
Deh Luran	Tepe Sabz	Ubaid 1, 2, 3, and 4	4,671	0.45	—	Hole 1977: table 38
	Choga Sefid	Ubaid 3?	747	0.30	—	Hole 1977: table 38

Table 13.2. The occurrence of flint in selected Ubaid sites

Site	Cores	Flakes	Blades	Debris	Arrow-heads	Scrapers	Denticu-lates	Glossed elements	Piercers / Borers	Burin	Notch	Edge retouched blade / flake	Splintered piece	Other		Chopper	Hoes	Pick/rod	Notes
Tell Kurdu, Trench 14	9	153 hard hammer	71	45	—	—	—	13	—	—	—	—	—	—	—	*	—	—	—
Yumuktepe	Rare; not standardized	—	—	—	—	—	—	* Fine-grained flint	—	—	—	—	—	—	—	—	—	—	—
Ras Shamra III C	111	68%	26	—	2	1	—	43	3	2	—	—	—	7 knives	1 bifacial	—	—	—	—
Ras Shamra III B	4	—	104	—	7	5	—	42	3	2	—	—	—	1 knife	4 daggers and Minet el Dalieh triangles	—	—	—	—
Kosak Shamali	569	6,717	405 + 246	1,404	—	40	163	355	28	26	82	—	3	—	—	3	1	1	—
Kosak Shamali	566	6,532	534	1,507	—	21	116	201	19	16	84	29 / 240	3	—	1	2	—	2	biface
Kosak Shamali	165	1,166	67	274	—	9	52	52	7	3	24	17 / 69	—	—	—	—	—	3	—
Tell al-'Abr	*	*	*	*	*	*	*	—	*	*	*	*	—	—	—	—	—	—	Arrowheads, scrapers, burins, and notches rare
Değirmintepe 6–11	758	4,555	218	9,426	—	81	3	45	7,330	1	94	—	—	—	—	—	—	—	—
Tülintepe	*	For piercers	—	*	*	—	—	—	* Many	—	—	—	—	—	—	—	—	—	No details. Arrowheads rare
Kenan Tepe	19 plus 52 struck nodules	610	27	101	—	6	10	14	4	—	—	32 (4 with worn edges)	—	—	1 bifacial	1	—	—	2 hammer stone fragments
Telul eth-Thalathat II, levels XIV–VIIb	—	—	—	—	—	—	—	* With bitumen	—	—	—	—	—	—	—	—	—	—	No details
Tell Madhhur	62	49.5%	175	86% flak-ing waste	—	—	*	51	*	—	—	*	—	—	—	—	*	—	hammerstones rare
Tell Mashnaqa	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No details
Yarim Tepe III	*	Many	—	—	—	—	—	*	—	—	—	—	—	—	—	—	*	—	Complete sickle
Khandjidal E	—	—	—	—	—	—	—	* Many in circular building	—	—	—	—	—	—	—	—	—	—	—
Choga Mami Ubaid well	33 flake; 3 blade	360	99	144	—	7	—	56	8	6	7	119	—	—	—	—	—	—	—
al- Saadiya	2	—	Pressure flaked	—	—	21	52	—	—	7	—	19 / 42	—	—	—	19 on quartzite	75	—	—
Tell Abada	12	673	272	155	—	46	—	67	—	—	8	—	—	—	—	—	—	—	—
Tepe Gawra XIX–XII	—	—	*	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—
Qalinj Agha	*	—	*	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—
Hassan 5a and 5b	—	—	* Large and standardized	—	—	—	—	37%	—	—	—	—	—	—	—	—	—	—	—
Abu Husaini	—	—	*	—	—	—	—	*	*	*	—	—	—	—	—	—	*	—	—
Kheit Qasim III	6	92 hard-hammer struck	72	—	—	—	19	21	—	1	—	23	—	—	—	—	—	—	Blades mostly soft-hammer struck, some pressure
Songor B and C	675	2,601	629	182	—	34	—	32	11	5	3	241	—	—	—	2	—	2	3 hammerstones
Ras al-Amiya	—	—	*	—	—	—	—	*	—	—	—	—	—	—	—	—	*	—	—
'Oueili	—	—	* Pressure flaked	—	—	—	—	*	* Drills (worn) and piercers	—	—	—	—	—	Leaf-shaped bifacials	—	—	—	—	—
al 'Ubaid	*	—	*	—	*	*	—	?	*	—	—	—	—	—	—	—	*	—	—
as-Sabiyah	Few	Dominant	—	—	*	—	—	—	Emphasis on	—	—	—	—	—	—	—	—	—	—
Tepe Sabz	148 mainly bl in Byat phase	—	478	3,511	—	2	—	130	23	1	75	108 fl; 66 fl	—	—	3	—	—	—	—
Choga Sefid	7	—	104	606	—	2	11	8	20	3	5	bl; 25 fl	—	—	—	—	—	—	—

oi.uchicago.edu

oi.uchicago.edu

Table 13.3. Occurrence of obsidian in selected Ubaid sites

Site	*Total obsidian*	*Cores*	*Blades*	*Flakes*	*Unclear fragments*	*Arrow-heads*	*Piercers*	*Scrapers*	*Burins*	*Splintered*	*Retouched*	*Notes*	*Golladag*	*Peralkaline*	*Calcalka-line*	*Other*	*Notes*
Tell Kurdu Trench 14	25 (Edens); 230 Braidwood	* (Braidwood)	15	7	3	3	3	—	—	—	—	—	*	*	*	Pasinler	Bressy et al. 2006
Yumuktepe	—	—	Very rare	Chips	—	* ? Reused	—	—	—	*	—	—	—	—	—	—	—
Ras Shamra IIIC	38	—	20	15	—	*	—	—	—	—	—	—	*	—	—	—	—
Ras Shamra IIIB	162	3	85	62	—	—	—	—	—	—	1 edge	—	—	—	—	—	—
Rouj 4 (Abd Aziz)	—	—	*	—	—	—	—	—	—	—	—	—	*	*	*	Meydan Dağ	4 samples analyzed (Maeda 2003 and pers. comm.)
Kosak Shamali	137	2	85	5	—	—	—	—	—	5	36	—	*	*	*	—	—
Tell al-'Abr	Rare	*	*	—	—	* ? Residual	—	—	—	—	—	—	—	*	*	—	Brownish black, greenish black, gray translucent. Source attrib-uted on basis of color
Değirmintepe; 6–11	632	93	13	364 +144 debris	—	—	*	—	*	—	*	—	—	*	*	—	Could be from river
Norşuntepe 40–37	—	*	*	*	*	*	*	—	—	—	—	—	—	*	*	—	Various colors. No geochemical analysis. Some may be riverine
Tülintepe	No details	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—
Hamman et-Turkman	—	—	—	—	—	—	—	—	—	—	—	—	—	* (Surface)	—	Zaranki	Colorless, opaque black, and green. Boerma in van Loon 1987
Kenan Tepe	269	4	68	126	12	2 + ?1	1	—	—	19	36 including 5 worn with striations	5 sbbf and cores	—	—	—	—	—
Telul eth-Thalathat II; levels XIV–VIIb	20%. Numerous blades, finished tools (not flakes)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Madhhur	22	Not studied	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mashnaqa	Numerous	—	*	—	—	*	—	—	—	—	*	Knives	—	—	—	—	—
Choga Mami Ubaid well	—	—	—	—	—	—	—	—	—	—	—	—	—	*	*	—	Smoky gray and green equally distributed throughout sequence.
Abada	—	—	—	—	—	—	—	—	—	—	—	—	—	*	*	—	On basis of appearance. No analysis
Tepe Gawra XIX–XII	—	—	—	—	—	—	—	—	—	—	—	—	—	*	*	—	On basis of appearance. No analysis
Abu Husaini	—	—	*	—	—	—	—	* Microdisk	—	—	* Notched and geometrics	—	—	—	—	—	—
Kheit Qassim III	—	—	Some	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Songor B and C	28	1	13	3	—	—	—	1	—	—	—	8 fragments	—	—	—	—	—
Ras al-Amiya	Freely used	—	*	—	—	—	—	—	—	—	—	—	—	*	—	—	Pale almost translucent, dense black and slightly greenish
'Oueili	—	Absent	Pressure	Hard hammer	—	—	*	—	—	—	*	—	—	*	—	3 unknown and used for polished objects	—
al 'Ubaid	268	*	*	—	—	*	—	*	—	—	*	—	—	—	—	—	Mottled with black patches on a dull red ground
Tello	—	—	* Pressure	—	—	—	—	—	—	—	—	—	—	—	—	—	—
as-Sabiyah	11	—	*	—	—	—	—	—	—	—	—	—	—	—	—	Arabian?	—
Qalinj Agha	—	—	*	—	—	—	—	—	—	—	*	Knives	—	—	—	—	—
Tepe Sabz	—	—	—	—	—	—	—	—	—	—	—	—	* (2b0	3	*	Zaranki/Meydan	—
Dosariyah	a number	—	—	—	—	—	—	—	—	—	—	—	Anatoian	—	—	—	—
Khor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Arabian ?	—

oi.uchicago.edu

Table 13.4. Occurrence of items of ground and polished obsidian in selected Ubaid sites

Site	*Bouton a Bélière*	*Biconical Beads*	*Jetons / Disks*	*Clous'*	*Disk Beads*	*Pendants*	*Spacer Beads*	*Fishtail Objects*	*Vessels*	*Other*	*Notes*
Tell Kurdu Trench 14	—	—	Several 4 cm across	—	1	1	—	—	*?	—	Vessel is surface find. Braidwood suggests Amuq E. Brown rhyolitic obsidian
Ras Shamra IIIC and B	—	1	—	—	1	—	—	—	—	—	—
Kosak Shamali	—	—	—	—	—	1	—	—	—	—	—
Tell al-'Abr	—	—	—	—	—	—	—	—	—	*	Looped button
Tülintepe	—	—	—	—	—	—	—	—	*	*	Small hooks
Kenan Tepe	—	*	—	—	—	*	—	—	* (× 2)	—	See Parker et al. 2009: 127
Tell Brak, deep sounding CH	—	—	—	—	—	—	—	—	*	—	—
Yarim Tepe III	—	—	—	—	—	—	* (triangular)	—	—	—	—
Tell Arpachiyah I–IV	—	—	—	—	—	—	—	—	—	*	Not seperable from Halaf examples
Tell Aqab	—	—	—	—	—	—	*	—	—	—	Compare Arpachiyah
Tepe Gawra XVI–XII	—	?	—	—	* in grave	—	* various	—	—	*	Seals
Songor C	—	3	—	—	—	—	—	—	—	—	3 ornaments
Ur	—	—	—	*	—	—	—	—	—	—	—
Ras al-Amiya	—	—	—	—	—	—	—	*	—	—	—
'Oueili	*	*	*	*	—	—	—	—	—	—	—
al-'Ubaid	—	—	—	*	—	—	—	—	* (× 2)	—	—
Eridu	—	—	—	—	—	—	—	—	—	—	—
as-Sabiyah	—	—	—	—	*	—	—	*	—	—	Flanged disk
Nineveh	—	—	—	*	—	—	—	—	—	—	—
Tello	—	—	—	*	—	—	—	—	—	—	—
Khor	—	* (× 7)	—	—	—	—	—	—	—	—	—

THE ACQUISITION AND USE OF RAW MATERIALS

Both flint and obsidian artifacts are found at most sites. Quartzite, sandstone and limestones are used as well as other silicified rocks and rock crystal and, in the case of Al-Saddiyah, jasper.

FLINT

Deliberate selection of certain kinds of flint for particular tool types is a recurrent theme. Blades (subsequently used for sickle inserts) are often made of so-called non-local raw flint on the grounds that they have no working debris associated with them (e.g., at Kosak Shamali, Değirmentepe, Tell al-'Abr, Norşuntepe, Tell Kurdu, al-Saddiyah). At 'Oueili, coarse-grained flint was used for hoes, fine for sickles, and granular for piercers (Coqueugniot 1996: 290–91); and at as-Sabiyah flint from the outcrop at al-Qurayn was preferred for arrowheads (Carter and Crawford 2003: 85). For most purposes, however, flint, which is readily available from the river gravels and terraces, was used. The extensive use of such raw material and the apparently casual nature of the knapped products might lead one to believe that the collection of raw materials was an incidental activity, but the storage of nodules in part of a room at Abu Husaini (Tusa 1980: 225) and reports of groups of stones in storerooms elsewhere (e.g., Tell Madhhur) suggest deliberate provisioning (though they could be related to some completely different activity); similarly, the presence of tested nodules at a number of sites might indicate that flint was in fact carefully selected. Flint is widely available in northern Mesopotamia, in both the limestone terraces and river terraces (for the Khabur, see Hole 2004: 336). It also outcrops in the Zagros hills (Miller and Miller 1984: 164), on Jebel Sinjar, and secondary deposits of flint and other minerals are found in the alluvium of southern Mesopotamia (Wright 1955; but see also Wilkinson 1995: 6, table 1), while tabular chert is found on the coast of Saudi Arabia and in Qatar (Frifelt 1989: 408, 416). Sometimes sources of flint and bitumen occur together (Miller and Miller 1984: 164). At as-Sabiyah

oi.uchicago.edu

bitumen probably comes from the Burgan source, near al-Qurayn, which is where some of the flint is also sourced (Carter and Crawford 2003: 88, n. 20).

The immediate and ready supply of the fluvatile flint would make control of resources difficult, but the use of apparently better flint for sickle blades and their manufacture off-site does seem to indicate some sort of control of both resources and production. However, until a workshop is found, this remains speculation. A systematic study, including characterization both of the potential sources and of the extent of their use, would provide clearer information about the choices made by Ubaid peoples. Local, non-flint materials (other than obsidian) include quartzite, rock crystal, and so on, probably also from the same river gravels as the flint (Kosak Shamali, as-Sabiyah, 'Oueili). The extent to which they were selected also needs to be examined more closely, particularly in areas poor in flint, so that their relevance can be gauged and to see if they have a rarity value, as well as seeing if there are temporal or spatial variations.

Reduction Strategies

The almost universal use of rounded river cobbles means that flake-based industries predominated because their rounded shape dictated the reduction strategy. Opportunities for the establishment of striking platforms and flaking surfaces were restricted, though once established multi-platform cores are not uncommon, suggesting systematic rather than opportunistic and profligate use of material.

Flakes were obtained from cobbles by direct percussion using a hard hammer (Değirmentepe, al-Saadiya, Kenan Tepe). The entire knapping process seems to have taken place on some sites, as the presence of a refitted core at as-Sabiyah confirms (Davies in Carter and Crawford 2001: 16). Hole and Kouchoukos report that in the Khabur nodules were smashed open to get smaller pieces (Akkermans and Schwarz 2003: 169). This would also generate a lot of flakes from early-stage working, thus giving the appearance of opportunistic or profligate use. There is a similar broken-up nodule from Kenan Tepe, though not from an Ubaid context, which when rejoined shows that in fact there was a strategy for opening and then reducing the nodule. Other evidence of household knapping comes from a working floor situated in an open space at the southwest corner of a building at Kosak Shamali (Nishiaki 2003: 26–27), which gives a rare insight into the organization of technology. There is also a hint of a knapping floor in a house at Kurdu where, thanks to poor housekeeping on the part of the occupants, chipping debris was found in the micro-debitage of a room floor (Özbal 2000). Less specific detail comes from finds of cores and flakes in rooms at Tell Madhhur, Tepe Gawra, Tell Abada, and others.

There is repeated evidence to show that lithic technology and raw-material choice are interdependent. Apart from the selection of raw material for the tool types mentioned above, true blades are made from raw materials for which there often is no working debris (Tell al-'Abr, Tell Kurdu, Değirmentepe, Kosak Shamali), and so they may have been brought in as blades. At Kurdu, Edens also records that the blades are probably soft-hammer struck and that they were worked differently from the flakes. He suggests that the different reduction strategies might reflect not only differential access to raw materials but also the social locations of production (Edens 2000a: 75), further confirming their separation. In the south, at Kheit Qasim III, for example, some flint blades produced by pressure (a technique more usually associated with obsidian; see below) were found in the northeast corner of a house, though no debitage was associated. Inizan (1987: 312) suggests that this may indicate that there was a special area for working outside the living area, or the presence of specialists whose working areas have not been found. If this is the case, then we should be looking for more specialized or "central" workshops, perhaps outside the settlements or in particular areas of the settlements, as in the lower towns later in the Uruk period, for example, at Titriş Höyük (Hartenberger, Rosen, and Matney 2000).

Retouched Pieces

The retouched repertoire is relatively limited. In flint, so-called hoes are often seen as the hallmark of the Ubaid period, and they certainly seem to occur universally and often in considerable quantity. They are also made of quartzite or other silicified rocks (Kosłowski 1986: 278), coarse flint (Coqueugniot 1996: 290), or even limestone (Nishiaki 2003: 27). There are a variety of sub-forms, and their function is not fully understood (Cauvin 1979). There are also choppers and picks made of limestone and sandstone (Nishiaki 2003: 27–28). Splintered pieces (see below) occur only rarely in flint.

oi.uchicago.edu

Glossed elements occur at most sites. They are frequently made of blades of different flint from the flake industry, often with bitumen or bitumen stains. It is often assumed that the gloss resulted from cutting cereals, although use-wear analysis has shown that the gloss could have been caused by cutting a variety of vegetal materials (see, for example, Anderson 1994), so we should be cautious about making an automatic correlation with cereal harvesting. Complete sickles are occasionally found. These are particularly interesting because they show precisely how the blades were hafted. A detailed hafting reconstruction by Nishiaki (1994, 1997, 2004), based on a complete sickle from Telul eth-Thalathat II — complete with the extent of the bitumen stains, the polish distribution, and the shape and retouch of other elements at Thalathat II and Kosak Shamali — enabled him to show that there were subtleties in the system of hafting. Not only are there a variety of inserts (rectangular, one-corner pointed, crescent shaped, parallelograms, etc., some of which are truncated and some of which have denticulated edges) that change in proportion through time, but there is also a preferred way of hafting — that is, whether the blades were set obliquely or in parallel. It appears that the oblique system of hafting (starting in southern Mesopotamia) was gradually replaced through middle Mesopotamia (Tell Hassan, Tell Madhhur, Kheit Qasim) by the parallel system, though at different rates in different areas. Documentation is not available for all sites, but at Kenan Tepe the parallel system is the norm, while at Değirmentepe both forms occur. Nishiaki suggests these variations reflect an Ubaid expansion (of cultural elements, not people) northward and westward, and that it reflects culturally patterned behaviors by different regional social groups (Nishiaki 2004: 387f.).

Other modified forms include piercers or borers or drills of various forms, on both flakes and blades (which are more drill-like). Remarkable are the double- and multi-pronged types made on flakes at Tülintepe, Çayböyü, İkizhoyuk, and Değirmentepe. They are particularly numerous at Değirmentepe (where they form almost 95 percent — some 7,330 artifacts — of the tools, groups of which are associated with specific structures; see Balkan-Altı 1995: 134). Their points are short and formed by notches. Some wear is found on their tips and others in the notches. At Tülintepe a large number were found in room BY, along with a number of pebbles, cores, and debris, as well as a series of blanks and complete polished and perforated obsidian "hooks," and it was initially assumed that they were used for perforating the hooks (Esin and Arsebük 1974). However, subsequent microwear analysis has shown that they do not have wear caused by rotation, but have short slanting lines probably caused by engraving objects such as seals, rather than being used as perforators (Arsebük 1986).

Denticulates occur in most assemblages. They are an ill-defined type encompassing a variety of forms. They are generally crude and made on thick flakes or even cores. Scrapers, including distinctive small thumbnail types at Değirmentepe and Kosak Shamali, as well as notches on flakes and blades and burins are rarer. Flakes and blades with retouch on their edges are frequent and sometimes worn (Tell al-'Abr, Kenan Tepe).

More elaborately shaped and retouched forms made on non-local flint (often considered to be socially significant; Knecht 1997: 6) include arrowheads. Typically they are lozenge shaped or have a tang or stem (Ras Shamra IIIC, Tell al-'Abr). They appear to be more frequent in the south, and in some instances they are associated with the Arabian Bifacial Tradition (Carter and Crawford 2003: 86). Bifacially flaked foliates or knives are rare and generally occur singly (Kosak Shamali, Kenan Tepe, as-Sabiyah, Tell 'Oueili, Kenan Tepe).

Therefore, on the one hand, the flint assemblages seem to be part of household daily and habituated activities, showing regional variations, and at an early stage perhaps harking back to Halaf traditions, but adapting to change as appropriate (Nishiaki 2003). But on the other hand, the choice of particular flint for sickle blades, arrowheads, and foliates (along with the use of obsidian) points to wider and more complex levels of social interaction.

OBSIDIAN

The obsidian found at most Ubaid-period sites is for the most part not local and often originates from sources several hundred kilometers from the sites at which it is found. Nevertheless, it is present at the majority of sites (table 13.1), though the number and type of artifacts at each site vary. As a scarce and exotic raw material originating from several different sources, it ought to be useful for identifying relations among different communities. However, the details available are somewhat sporadic so that, at present, it is only possible to suggest ways forward rather than to draw clear conclusions.

oi.uchicago.edu

The Distribution of Obsidian

Obsidian is usually present as a proportion of the chipped stone, though actual amounts vary from about 600 pieces to as few as three. Almost everywhere where there is evidence, it reduces in quantity from the preceding Halaf assemblages, but often increases again in the Uruk.

In the middle Euphrates and the northern Levant, it occurs in very small quantities (usually around 1 or 2 percent of chipped stone), for example at Kosak Shamali (137 pieces or 0.4 percent from Ubaid contexts) and at Tell al-'Abr, where it is described as rare. Farther west at Tell Kurdu, there are 255 pieces (Edens 2000a: 78), and at Mersin it is more common than flint (Zambello 2004: 150). The proportion of obsidian increases farther east with Kenan Tepe on the Upper Tigris having about 23 percent (some 269 pieces). Sites in the Khabur region have a high percentage of the raw materials (actual numbers are not given), at Aqab and Hamoukar "blocks" of raw material are reported (Cauvin and Chataigner 1998: 346–48), while Thalathat II, east of the Khabur, has about 20 percent (Nishiaki 2003: 56). Farther south, at Tell Hassan, obsidian accounts for about 12 percent, while at Ras al-Amiya it is "freely used" (Stronach 1961: 106). It is found regularly but in small quantities in southern Mesopotamia.

At sites in the Keban Dam area (Değirmentepe, Tülintepe, Çayböyü, and Norşuntepe), some seems to have been acquired locally from the river gravels (but see also Schmidt 1996: 17–20), where it occurs as small round balls about 2.5–3.0 cm in diameter along with flint. Even so its use varies; Değirmentepe has only 2.93 percent obsidian (632 pieces), whereas at Çayböyü, Tülintepe, and Norşuntepe it predominates.

While the variation in quantity by area is interesting and has been used to speculate about the mechanics of supply, we should be cautious about basing arguments on obsidian consumption without understanding the relative proportions from each source and how the assemblages are composed. Distance does not necessarily seem to be a determining force (cf. Barge and Chataigner 2003).

Origins of the Obsidians (table 13.4)

At some sites with earlier occupation, it is possible that obsidian was scavenged and reused (e.g., Yumuktepe and Tell al-'Abr), but it is more likely that the obsidian was specifically acquired. Hole (2000: 21) has suggested that by the Ubaid period the eastern sources were preferred, though this may reflect the location of the majority of sites. For the most part, however, details of source use are not comprehensive, although it does seem that obsidian ultimately came from more than one source.

Cappadocian obsidian, particularly from Göllüdağ East, is found at Tell Kurdu (Bressy, Poupeau, and Yener 2005) and probably Yumuktepe, as well as much farther afield at Mashnaqa on the Khabur, at Sabz in the Zagros (Renfrew's 2b source; Cauvin and Chataigner 1998: 348), and perhaps at Kosak Shamali (though contextual details of the sample is not provided) and Tell al-'Abr.

Calcalkaline obsidians from the Bingöl area (Renfrew's 1g) are widespread, being found at Kurdu, Kosak Shamali, Kenan Tepe, probably Tell al-'Abr, and in the Gulf.

Distinctive green peralkaline obsidians (Renfrew's 4c) come from either Nemrut Dağ or the Bingöl region and are found at Kurdu, Kenan Tepe, Kosak Shamali, Tell al-'Abr, Hamman et Turkman, Arpachiyah, and farther south in the Deh Luran. Some of the obsidians in the Keban area seem to ultimately derive from this source as well (Balkan-Atlı 1995: 129).

More unexpected is the presence of obsidian from less-commonly found sources including the following:

- Pasinler, located near Kars in northeast Anatolia (Tell Kurdu);
- Meydan Dağ/Zarnacki Tepe/Ziyaret Tepe in the Lake Van region (Tell Kurdu, Hammam et-Turkman, Kenan Tepe); this may be more than one source; Renfrew's 3d source, of unknown origin but probably from this area, is found at Dhahran;
- Yemeni or western Arabian obsidians (Renfrew and Dixon 1976; Zarins 1989) are found as far north as 'Oueili, as well as at as-Sabiyah and farther down the Gulf at Khor in Qatar (Midant-Reynes 1985), though we do not know the extent of their distribution or relative importance.

The pattern is clearly complex, with the obsidian at most sites originating from more than one source (table 13.4). Unfortunately, we do not know the relative proportions from each source, let alone what they were used for. This is partly due to difficulties in acquiring samples for analysis. A possible alternative approach, used with some success elsewhere (e.g., Renfrew 1977; Healey 2000, 2007; cf. Maeda 2003), is to group the obsidian by its physi-

oi.uchicago.edu

cal characteristics — color, in particular — and to test the groupings by targeted geochemical analysis. It is then possible to gain some appreciation of the relative importance of each group. It is thought, for example, that green peralkaline obsidian in Anatolia is limited to the sources at Bingöl and Nemrut Dağ (Renfrew 1977), although other sources of peralkaline obsidians are now known (e.g., Poidevin 1988: 139). Care should be taken, however, not to confuse them with the Yemeni green obsidians.

As a test case, and in an attempt to establish the relative importance of the obsidians at Kenan Tepe, all the obsidian from that site was grouped on the basis of color using the principles established elsewhere (Healey 2000; Healey and Campbell 2009 and in prep.) and, although the samples have not yet been geochemically analyzed, figure 13.1 shows that several different obsidians were exploited including both peralkaline (as indicated by the green obsidians) and calcalkaline sources,[2] and that preferences changed over time.

This change in the proportion of different colored obsidians through the occupation goes hand in hand with the increase of working cobbles (black in color) demonstrated by the increase in flakes and the decreasing importance of blades (mainly of green obsidian[3]; fig. 13.2).

Although these groupings do not necessarily provide precise information on the sources, they do allow us to get some measure of the relative importance of the various obsidians at individual sites, and by tying it to technology it might allow us to see that certain obsidians are coupled with technologies or types, as in previous periods (cf. Nishiaki 1993).

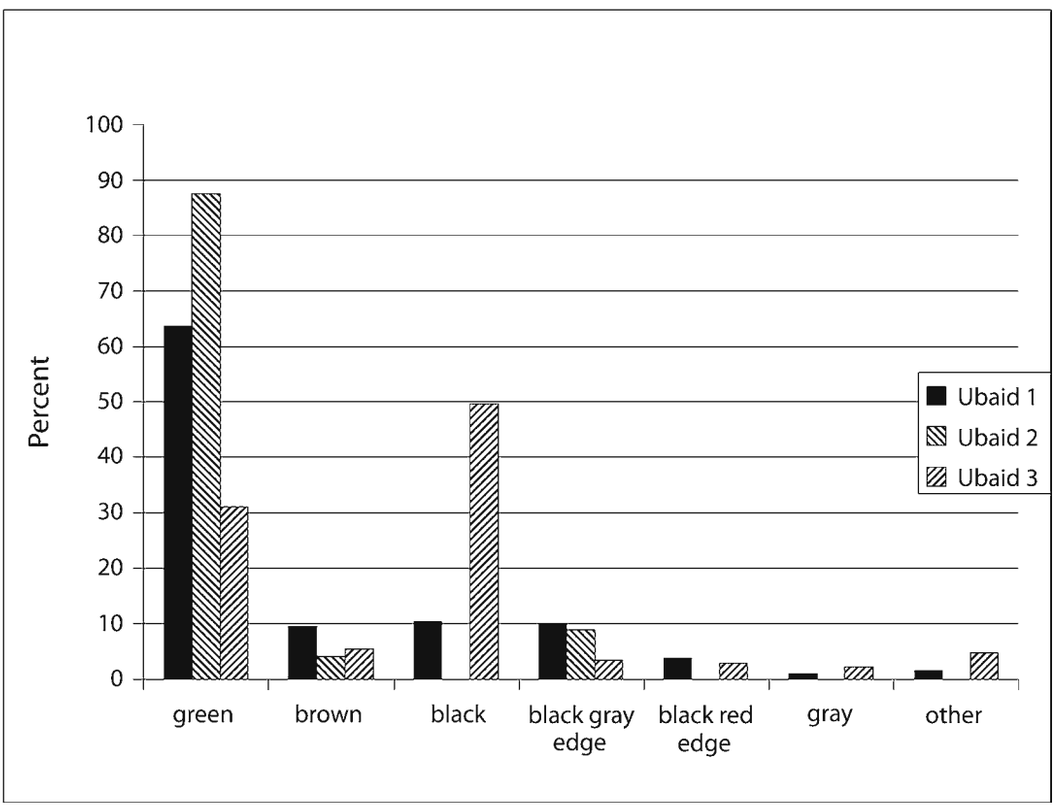


Figure 13.1. Kenan Tepe: distribution of obsidian by color and phase

[2] Preliminary results of lead isotope analysis undertaken through the good offices of Ray Burgess and Stephanie Flude, School of Earth, Atmospheric and Environmental Sciences, University of Manchester, suggest that one of the samples comes from Meydan Dağ, north of Lake Van, although this awaits confirmation by geochemical analysis.

[3] As a caveat, it is possible that black is over-represented due to not enough light being transmitted through thick flakes to gauge color. This seems unlikely because other, thicker pieces are clearly green. Nevertheless, more precise sourcing analysis needs to be conducted before inferring too much about connections using just this evidence.

oi.uchicago.edu

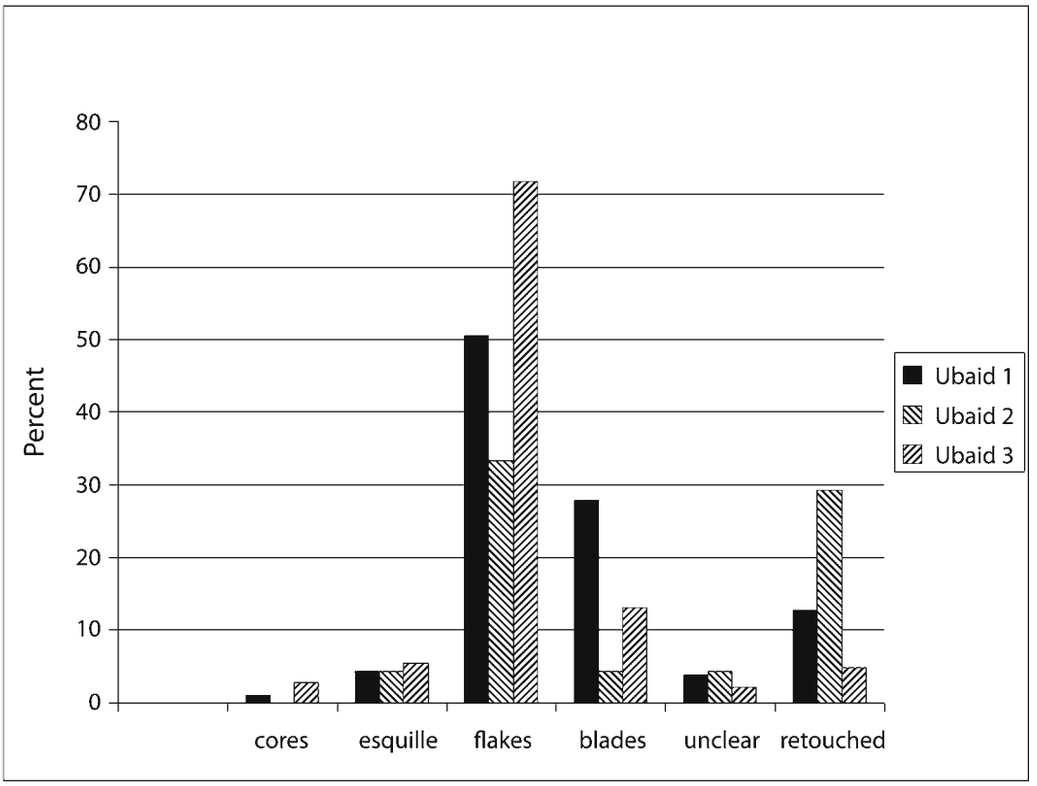


Figure 13.2. Kenan Tepe: use of obsidian by phase

Obsidian Technology

Technological details are generally confined to the identification of blades produced by pressure flaking in contrast to flakes resulting from a percussion technology.

The attributes used to identify reduction using a pressure technology include, for example, abrading the edge of the platform, parallel sides and ridges, an even thickness, the standard width of blades (see Healey 2000: 45, for references). Cores have the corresponding regular scarring pattern and are well maintained. Blades detached by pressure have been recorded at Kurdu, Kenan Tepe, Kosak Shamali, Kheit Qasim, ‘Oueili (where more of the face of the core is ground), and others. It is, however, rare to find the corresponding blade cores, although examples have been recorded at Kurdu (Braidwood and Braidwood 1960: 213) and implied at Kosak Shamali (Nishiaki 2003: 43). At Değirmentepe, where local river cobbles were used, the nodules were split to produce bladelets, probably using a pressure technique (Balkan-Atlı 1995). Farther east, cores are found in the Khabur, at Qalinj Arga, and Kheit Qasim, though we do not know the relative proportion in the assemblages. At Tepe Gawra XII, four cores and sixteen blades were found in association with tripartite buildings (Rothman 2001: table 10.3, 2002: 78–79).

At the same time, flakes with fairly prominent bulbs of percussion, probably hard-hammer struck, tend to be associated with on-site production, as at Kenan Tepe and Kosak Shamali. A core from Tell al-‘Abr was noted as being worked in the same way as flint, and at Kenan Tepe flakes are small and irregular and suggest local reduction. Unfortunately, there is little evidence of obsidian flakes and cores matching up.

Modification

There is little information on the function of obsidian artifacts, though studies of other periods suggest that at least in some instances they were used differently from flint artifacts (Caneva et al. 2001: 177), but that they could be used for working plants (Iovino 2004). Two retouched blades from Kosak Shamali are very similar in form to the flint-glossed elements and may have been used along with the flint to work plants. Obsidian blades and flakes tend to be only minimally modified or used on their long edges and, as at Kenan Tepe, are sometimes heavily worn. Whether this is because they were used differently from flint or whether they wear more easily remains to be exam-

oi.uchicago.edu

ined. Among the more formally retouched pieces are scrapers, piercers, burins, and arrowheads at, for example, Kenan Tepe, Tülintepe, Norşuntepe, and other sites in the Keban area (Cauvin and Chataigner 1998: 347), Mashnaqa, al ʻUbaid. At Değirmentepe there is a piece with invasive flaking on its dorsal surface (Balkan-Atlı 1995: fig. 3:15, 130) reminiscent of some transverse arrowheads from Tell Sabi Abyad (Copeland 1996: fig. 4.17). Splintered pieces or *pièces ésquillées* (small, usually squat artifacts with what appears to be bifacial flaking and extensive crushing and splintering on one or more of their edges) are almost exclusively made of obsidian. Their purpose remains enigmatic; it has been suggested that they result from reduction on an anvil (the wedge technique) to maximize raw-material usage, or that they were used as wedges in working wood or bone (Ataman 1989: 208–10; Conolly 1999: 43–47, 2003: 367). They have a long history from the Neolithic through to Uruk contexts (Conolly 2003) and in Ubaid contexts have been documented at Kurdu, Norşuntepe, Kenan Tepe, and Kosak Shamali. On the present evidence, they seem to be a northern Ubaid phenomenon, though they also appear in assemblages of the Arabian Bifacial Tradition at as-Sabiyah.

Mechanics of Distribution

It is likely that the sites in the Keban Dam area had direct access to what was, for them, local material, and they should perhaps be discounted from this discussion. It is nevertheless interesting that they deliberately sought out obsidian and used it differently. The large quantities at sites in the Khabur might suggest redistribution centers, though we lack details of the origins of the obsidians there (Cauvin and Chataigner 1998: 347). It has been suggested that in the Gulf obsidian was part of an "Ubaid package," but the finding of Yemeni/western Arabian obsidian and the prevalence of lithic industries in the Arabian Bifacial Tradition (Carter and Crawford 2003: 86) indicate that we need to revise this.

Non-utilitarian Uses of Obsidian

Obsidian is used to make a variety of decorative items, finished to a greater or lesser degree by grinding and polishing. These include beads, disks, pendants, studs, and vessels. Indeed, it has been suggested that this was the sole purpose of the obsidian in the workshop at Tülintepe (Esin and Arsebük 1974: 156). Similarly, at as-Sabiyah this may be the only use of obsidian (Kallweit, in Carter and Crawford 2003: 86, n. 12) because the blades have a rough, dull surface that may be from incipient grinding. Flint is only rarely used for ornaments. A perforated bead from Kosak Shamali (Nishiaki 2000: 244, fig. 15.17:10, pl. 15.10:3) is a rare exception and was shaped by chipping but was not ground. Other raw materials were used for similar items of jewelry and stone bowls but not for tool manufacture (except possibly polished axes). It may be significant that, where documented, the obsidian used in jewelry tends to be the gray and translucent type (Coqueugniot 1996: 292). This was the case at Kenan Tepe too, where it is also used for vessels.

There is a great variety of form among the ground and polished objects, and there is sometimes evidence for local manufacture. Small, simply made disk beads with rudimentary grinding are found at Tell Kurdu, where microdebitage analysis also revealed a workshop in which they were made (Özbal 2000: 52). Beads broken in manufacture, for example at ʻOueili (Breniquet 1991: 313), may also suggest this, as does a minimally ground pendant made of a flake of obsidian from Tell Kosak Shamali. Biconical beads come from Kenan Tepe, Yarim Tepe, and the Gulf, for example, at Khor. Pendants are found at Ras Shamra, Kurdu, and Kenan Tepe. A small button was found at Tell al-ʻAbr (Hammade and Yamazaki 2006: pl. 10:14). Spacer beads are known from Tell Arpachiyah, Aqab, Yarim Tepe III (triangular in form), Tepe Gawra, and Choga Mami. Disks or jetons are noted at Kurdu (Yener et al. 2000: 72–73), Ras Shamra IIIC and B (de Contenson 1992: 116, 121), and ʻOueili. Small, hooklike objects of ground and polished obsidian were found at Tülintepe (Esin and Arsebük 1974), where apparently the whole manufacturing sequence was present from blank to finished object (but see also Arsebük 1986). Flat plaques or "fish-tailed" objects were found in the upper levels of a house at Ras al-Amiya and at as-Sabiyah. Studs seem to be a southern Mesopotamian type, being found at ʻOueili, Sharain, al ʻUbaid, Tello, and ʻUqair, while hemispheroid stamp seals were found in Gawra XII.

Fragments of highly finished, thin-walled vessels have been found at Kenan Tepe (two pieces), Tülintepe (Arsebük 1983: 57, fig. 4.7), Tell Kurdu (Braidwood and Braidwood 1960: 216 and fig. 162:14; a surface find considered to come from Amuq E levels), Brak (deep sounding), and Ubaid levels in southern Mesopotamia (Eridu, al ʻUbaid, and possibly Warka). The size of the vessels (ca. 7–11 cm in diameter) implies the need for sizeable blocks of raw

oi.uchicago.edu

obsidian or large cores. So far there is no evidence of anything of a suitable size, and this, coupled with the lack of evidence for working and high finish, suggests that they may have been specialist products with specific production localities.

Apart from the rarity of obsidian and its dual use for artifacts and non-utilitarian items, there is little to suggest the status of obsidian. At Gawra unmodified blades are occasionally found in graves (Inizan 1987: 313f.), which may point to some special association. The tradition of transforming obsidian into ornaments and similar items is not new to the Ubaid period but is known from the PPN. It reaches a maximum in the Halaf and continues later (Healey 2007: table 1). Some of these items occur with similar forms in other raw materials, and it is possible that the significance transfers from the material to the form.

CONTEXTUAL AND SPATIAL CONSIDERATIONS

An understanding of the way in which spaces were used is important because, although the archaeological correlates for activities may look similar, social contexts may vary (Matthews 2003: 105). It is important, therefore, to look beyond the lithics to determine functional space (cf. Rothman 2002: ch. 4).

Almost all the information we have seems to come from domestic situations. Lithics regularly occur within buildings, but little is known of their purpose. Knapping floors occur in or near buildings (Kurdu, Kosak Shamali), while workshops seem to be in rooms (Kurdu, Tülintepe, and perhaps Değirmentepe). Rubbish dumps for specific types of waste suggest spatially separated activity areas at Kurdu, where a dump in locus 19 contrasts with that in the rest of the trench (Edens 2000a: 78). Workshops for the manufacture of specific items also occur within household contexts (Kurdu, Tülintepe, Değirmentepe)

Off-site and perhaps more communal workshops are hinted at for blade manufacture (such as those used in sickles) since no working debris is found. This may suggest that some items were made in more dedicated, if not specialized, workshops, perhaps within the wider community, rather than individual houses, or at the source of the raw material.

CONCLUSIONS

Although little detail is available for documenting chronological and regional variations, this review suggests that common themes and regional variation can be seen in the acquisition of raw materials and in the production and use of lithic artifacts. Far from being inanimate static data sets, lithic artifacts are very much bound up with both the everyday activities of each community and their wider contacts.

The ready-available and virtually inexhaustible supply of local riverine flint and other materials for local and probably household production of everyday artifacts suggests that access to these sources was unrestricted and manufacture uncontrolled. We should, however, be alert to regional groupings among these assemblages — for example, in the southern sites where there are not only stylistic affinities with the Arabian tradition, but also the acquisition of obsidian from those regions. More controlled access to other flint and the production of blades is suggested by the repeated lack of working debris in this sort of flint. These blades seem to have been primarily used for sickle inserts, and it is possible that harvesting was a communal activity in more than one respect (Kadowaki 2005). They also seem to be sensitive to chronological and regional or ethnic variation (Edens 2000b; Hole 2001; Nishiaki 2004: 389).

Obsidian most clearly suggests cultural complexity through extensive contacts, although it cannot be described as a critical resource in terms of the economics of tool manufacture, and most of its functions could have been performed equally well by chert tools. But the regular occurrence of obsidian from a range of sources, and its manufacture into non-utilitarian items, hint at more complex interactions. We now need to look more closely at the proportion of obsidian from each source, as well as what it was made into. In whatever way obsidian entered the system, in some respects it seems to have become part of everyday life, but it was also used for specific (non-essential?) activities in a variety of ways (perhaps local responses), including the manufacture of beads and hooks. Other items, in particular the vessels, seem to have been acquired in a finished state.

oi.uchicago.edu

Targeted, detailed, and methodical study of the sources and methods of acquisition and use of raw materials for chipped-stone tool production, together with the analysis of technological practices and products, as well as functional and contextual information, will allow us to see how lithics are part of society and are in turn both shape and are shaped by it, and so they inform our understanding of the choices made by Ubaid peoples.

BIBLIOGRAPHY

Abu al-Soof, B.

1966 "Short Soundings at Tell Qalinj Agha (Erbil)." *Sumer* 22: 77–82.

1969 "Excavations at Tell Qalinj Agha (Erbil), Summer 1968." *Sumer* 25: 3–42.

Abu al-Soof, B., and S. es-Siwwani

1967 "More Soundings at Tell Qalinj Agha (Erbil)." *Sumer* 23: 69–75.

Akkermans, Peter M. M. G., and Glenn M. Schwartz

2003 *The Archaeology of Syria: From Complex Hunter-Gatherers to Early Urban Societies (ca. 16,000–300 B.C.)*. Cambridge: Cambridge University Press.

Anderson, P. C.

1994 "Reflections on the Significance of Two PPN Typological Classes in the Light of Experimentation and Microwear Analysis: Flint 'Sickles' and 'Çayönü Tools.'" In *Neolithic Chipped Stone Industries of the Fertile Crescent*, edited by H. G. Gebel and S. K. Kosłowski, pp. 61–82. Studies in Early Near Eastern Production, Subsistence and Environment 1. Berlin: Ex oriente.

Arsebük, Güven

1983 "Some Aspects of a Prehistoric Village." In *Beiträge zur Altertumskunde Kleinasiens: Festschrift für Kurt Bittel*, edited by R. M. Boehmer and H. Hauptmann, pp. 51–57. Mainz am Rhein: Philipp von Zabern.

1986 "An Assemblage of Microlithic Engravers from the Chalcolithic of Değirmentepe, Malatya." *Anadolu Araştırmaları* 10: 131–42.

Ataman, K.

1989 The Chipped Stone Assemblage from Can Hassan III: A Study in Typology, Technology and Function. Ph.D. dissertation. University College London.

Balkan-Atlı, N.

1995 "A Preliminary Report of the Chipped Stone Industry of Değirmentepe, an Ubaid Settlement in Eastern Anatolia." *Readings in Prehistory: Studies Presented to Halet Çambel*, pp. 127–48. Istanbul: Graphis Publishing.

Barge, O., and Christine Chataigner

2003 "The Procurement of Obsidian: Factors Influencing the Choice of Deposits." *Journal of Non Crystalline Solids* 323: 172–79.

Braidwood, Robert J., and Linda S. Braidwood

1960 *Excavations in the Plain of Antioch*, Volume 1: *The Earlier Assemblages: Phases A–J*. Oriental Institute Publications 61. Chicago: University of Chicago Press.

Breniquet, Catherine

1991 "Les petits objets de l'époque d'Obeid découverts à Tell el 'Oueili en 1985." In '*Oueli: Travaux de 1985 sous la direction de Jean-Louis Huot*, edited by J.-L. Huot, pp. 313–20. Éditions recherche sur les civilisations, mémoire 89. Paris: Éditions recherches sur les civilisations.

Bressy, C.; G. Poupeau; and K. Aslıhan Yener

2005 "Cultural Interactions during the Ubaid and Halaf Periods: Tell Kurdu (Amuq Valley, Turkey) Obsidian Sourcing." *Journal of Archaeological Science* 32: 1560–65.

Bulgarelli, M. G.

1984 "Tell Hassan: The Lithic Industry." *Sumer* 40: 290–92.

oi.uchicago.edu

1985 "Tell Hassan. L'industria litica." In *La terra tra i due fiumi: Catalogo de la Esposizione de Torino 1985*, edited by A. Invernizzi, pp. 34–36. Turin: Museo di Antichità.

Caneva, I.; M. R. Iovino; C. Lemorini; A. Ozdogan; and D. Zampetti

2001 "A Combined Analysis of Lithic Assemblages from Cayonu." In *Beyond Tools: Redefining the PPN Lithic Assemblages of the Levant* (Proceedings of the Third Workshop on PPN Chipped Lithic Industries, Department of Classical and Near Eastern Studies, Ca'Foscari University of Venice, 1st–4th November, 1998), edited by I. Caneva, C. Lemorini, D. Zampetti, and P. Biagi, pp. 165–81. Studies in Early Near Eastern Production, Subsistence and Environment 9. Berlin: Ex oriente.

Carter, Robert A., and Harriet Crawford

2001 "The Kuwait-British Archaeological Expedition to as-Sabiyah: Report on the Second Season's Work." *Iraq* 63: 1–20.

2002 "The Kuwait-British Archaeological Expedition to as-Sabiyah: Report on the Third Season's Work." *Iraq* 64: 1–14.

2003 "The Kuwait-British Archaeological Expedition to as-Sabiyah: Report on the Fourth Season's Work." *Iraq* 65: 77–90.

Cauvin, Marie-Claire

1979 "Tello et l'origine de la houe au Proche-Orient." *Paléorient* 5: 193–206.

Cauvin, Marie-Claire, and Christine Chataigner

1998 "Distribution de l'obsidienne dans les sites archéologiques du Proche et du Moyen Orient (par phase chronologique)." In *L'obsidienne au Proche et Moyen Orient: Du volcan à l'outil*, edited by M.-C. Cauvin, pp. 325–50. British Archaeological Reports, International Series 738. Oxford: British Archaeological Reports.

Conolly, James

1999 *The Çatalhöyük Flint and Obsidian Industry: Technology and Typology in Context*. British Archaeological Reports, International Series 787. Oxford: Archaeopress.

2003 "Tools and Debitage of Obsidian and Flint." In Excavations at Tell Brak 4: *Exploring an Upper Mesopotamian Regional Centre, 1994–1996*, edited by R. Matthews, pp. 363–75. McDonald Institute Monographs. London: British School of Archaeology in Iraq.

Copeland, L.

1996 "The Flint and Obsidian Industries." In *Tell Sabi Abyad, the Late Neolithic Settlement: Report on the Excavations of the University of Amsterdam (1988) and the National Museum of Antiquities, Leiden (1991–1993) in Syria,* edited by P. M. M. G. Akkermans. Leiden: Nederlands Historisch-Archaeologisch Instituut te Istanbul.

Coqueugniot, E.

1996 "Oueili: Le travail de l'obsidienne et des roches siliceuse a l'époque d'Obeid (Campagnes de 1987 et 1989)." In *Oueili: Travaux de 1987 et 1989 sous la direction de Jean-Louis Huot*, edited by J.-L. Huot, pp. 289–306. Paris: Éditions recherches sur les civilisations.

Davidson, Thomas E., and Trevor Watkins

1981 "Two Seasons of Excavation at Tell Aqab in the Jezirah, N.E. Syria." *Iraq* 43: 1–18.

de Contenson, Henri

1992 *Ras Shamra-Ougarit*, Volume 8: *Préhistoire de Ras Shamra: Les sondages stratigraphiques de 1955 à 1976*. 2 volumes. Paris: Éditions recherche sur les civilisations.

Dobres, Marcia-Anne

2000 *Technology and Social Agency: Outlining a Practice Framework for Archaeology*. Social Archaeology. Malden: Blackwells.

Edens, Christopher

2000a "Chipped Stone." In "Tell Kurdu Excavations 1999," edited by K. A. Yener. *Anatolica* 26: 31–117.

2000b "The Chipped Stone Industry at Hacinebi: Technological Styles and Social Identity." *Paléorient* 25: 23–33.

oi.uchicago.edu

Edmonds, M. R.

1990 "Description, Understanding and the Chaîne Opératoire." *Archaeological Review from Cambridge* 9: 55–70.

1995 *Stone Tools and Society: Working Stone in Neolithic and Bronze Age Britain*. London: Batsford.

Esin, Ufuk, and Güven Arsebük

1974 "Tulintepe Excavations, 1971." In *Keban Project 1971 Activities*, pp. 149–59. Middle East Technical University Keban Project Publications, Series 1, No. 4. Ankara: Turkish Historical Society Press.

Forest-Foucault, C.

1980 "Rapport sur les fouilles de Kheit Qasim III, Hamrin." *Paléorient* 6: 221–27.

Frifelt, K.

1989 "'Ubaid in the Gulf Area." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 405–17. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Fujii, H., editor

1981 "Preliminary Report of Excavations at Gubba and Songor." *Al-Rāfidān* 2: 131–241.

Fukai, Shinji; Kiyoharu Horiuchi; and Toshio Matsutani, editors

1970 *Telul eth Thalathat* 2: *The Excavation of Tell II; The Third Season (1964)*. Tokyo University Iraq-Iran Archaeological Expedition, Report 11. Tokyo: Yamakawa.

Garstang, John

1953 *Prehistoric Mersin: Yümük Tepe in Southern Turkey*. Oxford: Clarendon Press.

Gero, J.

1989 "Assessing Social Information in Material Objects: How Well Do Lithics Measure Up?" In *Time, Energy and Stone Tools*, edited by R. Torrence, pp. 92–105. Cambridge: Cambridge University Press.

Hall, Henry R., and C. Leonard Woolley

1927 *Al-'Ubaid*. Ur Excavations 1. London: Oxford University Press.

Hammade, Hamido, and Yayoi Yamazaki

2006 *Tell al-'Abr (Syria): Ubaid and Uruk Periods*. Association pour la promotion de l'histoire et de l'archéologie orientales, mémoires 4. Louvain: Peeters.

Hartenberger, B.; S. Rosen; and T. Matney

2000 "The Early Bronze Age Blade Workshop at Titriş Höyük: Lithic Specialization in an Urban Context." *Near Eastern Archaeology* 63: 51–58.

Healey, Elizabeth

2000 The Role of Obsidian in the Late Halaf. Ph.D. dissertation, University of Manchester.

2006 "Lithics." In *The Upper Tigris Research Project (UTARP): A Preliminary Report from the 2003 and 2004 Field Seasons at Kenan Tepe*, edited by B. J. Parker et al. *Anatolica* 32: 94–99.

2007 "Obsidian as an Indicator of Inter-regional Contacts and Exchange: Three Case Studies from the Halaf Period." In "Transanatolia: Bridging the Gap Between East and West in the Archaeology of Ancient Anatolia," edited by A. Greaves and A Fletcher. Special issue, *Anatolian Studies* 57: 171–89.

Healey, Elizabeth, and Stuart Campbell

2009 "The Challenge of Characterising Large Assemblages of Exotic Materials: A Case Study of the Obsidian from Domuztepe, S.E. Turkey." In "Proceedings of the Implement Petrology Group Conference on Stone Tools, York, September 2007," edited by M. Edmonds and V. Davis. *Internet Archaeology* 26. http://intarch.ac.uk/journal/issue26/

Hodder, Ian A.

1982 "Theoretical Archaeology: A Reactionary View." In *Symbolic and Structural Archaeology*, edited by I. Hodder, pp. 1–16. New Directions in Archaeology. Cambridge: Cambridge University Press.

oi.uchicago.edu

Hole, Frank

1977 *Studies in the Archeological History of the Deh Luran Plain: Excavation of Chagha Sefid*. Memoirs of the Museum of Anthropology 9. Ann Arbor: University of Michigan.

2000 "The Prehistory of the Khabur." In *La Djéziré et l'Euphrate Syriens de la protohistoire à la fin du II^e millénaire av. J.-C.: Tendances dans l'interprétation historique des données nouvelles*, edited by O. Rouault and M. Wäfler, pp. 17–27. Subartu 7. Turnhout: Brepols.

2001 "History and Variability of Glossed Flint Elements." In *Beyond Tools: Redefining the PPN Lithic Assemblages of the Levant*, edited by I. Caneva, C. Lemorini, D. Zampetti, and P. Biagi, pp. 399–410. Studies in Early Near Eastern Production, Subsistence and Environment 9. Berlin: Ex oriente.

2004 "K-260: Selective Use of Lithic Sources in the PPN/PN of the Khabur Basin, Syria." In *From the River to the Sea: The Palaeolithic and the Neolithic on the Euphrates and in the Northern Levant; Studies in Honour of Lorraine Copeland*, pp. 335–53. British Archaeological Reports, International Series 1263. Oxford: Archaeopress.

Huot, Jean-Louis

1994 *Les premiers villageois de Mésopotamie: Du village à la ville*. Paris: A. Colin.

Inizan, M.-L.

1986 "Tell el 'Oueili: The Knapped Stone Finds." *Sumer* 44: 120–22.

1987 "Technologie et préhistoire récente en Mésopotamie: L'exemple du débitage par pression et de l'économie de l'obsidienne." In *Préhistoire de la Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du djebel Hamrin (*Colloque international du Centre National de la Recherche Scientifique, Paris 17–19 décembre 1984), edited by J.-L. Huot, pp. 305–16. Paris: Éditions du Centre National de la Recherche Scientifique.

Inizan, M.-L., and J. Tixier

1981 "Le matériel lithique." *Syria* 58: 137–44.

Iovino, M.

2004 "Use Wear Trace Analysis on Obsidian Tools from the Early Neoltihic of Yumuk Tepe." In *Mersin-Yumuktepe: A Re-appraisal*, edited by I. Caneva and V. Sevin, pp. 153–57. Galatina (Lecce): M. Congleo.

Jasim, Sabah A.

1985 *The 'Ubaid Period in Iraq: Recent Excavations in the Hamrin Region*. British Archaeological Reports, International Series 267. Oxford: British Archaeological Reports.

Johnson, J. K.

1996 "Lithic Analysis and Questions of Cultural Complexity." In *Stone Tools: Theoretical Insights into Human Prehistory*, edited by G. H. Odell, pp. 159–80. London and New York: Plenum.

Kadowaki, S.

2005 "Designs and Production Technology of Sickle Elements in Late Neolithic Wadi Ziqlab, Northern Jordan." *Paléorient* 31: 69–85.

Knecht, Heidi

1997 "The History and Development of Projectile Technology Research." In *Projectile Technology*, edited by H. Knecht, pp. 3–36. Interdisciplinary Contributions to Archaeology. New York: Plenum.

Kosłowski, S. K.

1986 "Chipped Stone Industry of the Ubaid Site Tell el-Saadiya in Iraq (Hamrin)." In *Préhistoire de la Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du djebel Hamrin (*Colloque international du Centre National de la Recherche Scientifique, Paris 17–19 décembre 1984), edited by J.-L. Huot, pp. 277–91. Paris: Éditions du Centre National de la Recherche Scientifique.

Lemonnier, Pierre, editor

1993 *Technological Choices: Transformation in Material Cultures since the Neolithic*. Material Cultures. London and New York: Routledge.

Lloyd, Seton, and Fuad Safar

1947 "Eridu: A Preliminary Communication on the First Season's Excavations, January–March 1947." *Sumer* 3: 84–111.

oi.uchicago.edu

1948 "Eridu: A Preliminary Communication on the Second Season's Excavations, 1947–48." *Sumer* 4: 115–27.

Maeda, Osamu

2003 "Prehistoric Obsidian Distribution in the Rouj Basin." In *Archaeology of the Rouj Basin,* Volume 1: *A Regional Study of the Transition from Village to City in Northwest Syria*, edited by T. Iwasaki and A. Tsuneki, pp. 167–84. Al-Shark 2. Tsukuba, Japan: Department of Archaeology, Institute of History and Anthropology, University of Tsukuba.

Mallowan, M. E. L.

1947 "Excavations at Brak and Chagar Bazar." *Iraq* 9: 1–259.

Mallowan, M. E. L., and J. Cruikshank Rose

1935 "Excavations at Tall Arpachiyah, 1933." *Iraq* 2: 1–178.

Matthews, Roger

2003 *The Archaeology of Mesopotamia: Theories and Approaches*. London: Routledge.

Merpert, N., and R. M. Munchaev

1993 "Yarim Tepe III: The Ubaid Levels." In *Early Stages in the Evolution of Mesopotamian Civilization: Soviet Excavations in Northern Iraq*, edited by N. Yoffee and J. J. Clark, pp. 225–40. Tucson and London: University of Arizona Press.

Midant-Reynes, B.

1985 "Un ensemble de sépultures en fosses sous cairn à Khor (Qatar): Études des rites funéraires." *Paléorient* 11: 129–44.

Miller R., and J. R. Miller

1984 "The Flaked Stone Industries at Tell Madhhur." *Sumer* 43: 164–67.

Monchambert, J.-Y.

1984 "Le Moyen Khabour: Contribution française a l'archéologie syrienne." *Syria* 61: 181–218.

Mortensen, P.

1973 "A Sequence of Samarran Flint and Obsidian Tools from Choga Mami." *Iraq* 35: 37–55.

Nasseney, M. S.

1996 "The Role of Chipped Stone in the Political Economy of Social Ranking." In *Stone Tools: Theoretical Insights into Human Prehistor*y, edited by G. H. Odell, pp. 181–228. London and New York: Plenum.

Nishiaki, Yoshihiro

1993 "Anatolian Obsidian and the Obsidian Industries of North Syria: A Typological Review." In *Essays on Anatolian Archaeology*, edited by H. I. H. P. Mikasa, pp. 120–40. Wiesbaden: Harrasowitz.

1994 "Hafting Systems of Sickle Elements from the Chalcolithic Levels of Telul eth-Thalathat II, Iraq." In *Neolithic Chipped Stone Industries of the Fertile Crescent: Proceedings of the First Workshop on PPN Chipped Lithic Industries* (Seminar für Vorderasiatische Altertumskunde, Free University of Berlin, 29th March–2nd April, 1993), edited by H. G. Gebel and S. K. Kosłowski, pp. 55–72. Studies in Early Near Eastern Production, Subsistence and Environment 1. Berlin: Ex oriente.

1997 "Neolithic Sickle Elements from the Balikh Valley, North Syria." *Al-Rāfidān* 18: 59–67.

2000 *Lithic Technology of Neolithic Syria*. British Archaeological Reports, International Series 840. Oxford: Archaeopress.

2003 "Chronological Developments of the Chalcolithic Flaked Stone Industries at Tell Kosak Shamali." In *Tell Kosak Shamali: The Archaeological Investigations on the Upper Euphrates, Syria*, Volme 2: *Chalcolithic Technology and Subsistence*, edited by Y. Nishiaki and T. Matsutani, pp. 15–111. Tokyo: University Museum, University of Tokyo; Oxford: Oxbow Books.

2004 "Sickle Manufacturing Technologies at Two Chalcolithic Sites in Northern Mesopotamia: Tell Kosak Shamali (Syria) and Telul eth-Thalathat II (Iraq)." In *From the River to the Sea: The Palaeolithic and the Neolithic on the Euphrates and in the Northern Levant; Studies in Honour of Lorraine Copeland*, edited by O. Aurenche, M. Le Mière, and P. Sanlaville, pp. 383–94. British Archaeological Reports, International Series 1263. Oxford: British Archaeological Reports.

oi.uchicago.edu

Özbal, Rana

2000 "Microartifact Analysis." In "Tell Kurdu Excavations 1999," edited by K. A. Yener et al. *Anatolica* 26: 49–55.

Parker, Bradley J., and Lynn Dodd

2005 "The Upper Tigris Archaeological Research Project (UTARP): A Preliminary Report from the 2002 Field Season." *Anatolica* 30: 69–110.

Parker, Bradley J.; Lynn Dodd; Andrew Creekmore; Elizabeth Healey; and Catherine Painter

2006 "The Upper Tigris Archaeological Research Project (UTARP): A Preliminary Report from the 2003 and 2004 Field Seasons." *Anatolica* 32: 71–151.

Parker, Bradley J.; Catherine P. Foster; Kathleen Nicoll; Jason R. Kennedy; Philip Graham; Alexia Smith; David E. Hopwood; Marie Hopwood; Kristen Butler; Elizabeth Healey; M. Bariş Uzel; and Reilly Jensen

2009 "The Upper Tigris Archaeological Research Project (UTARP): A Preliminary Report from the 2007 and 2008 Field Seasons at Kenan Tepe." *Anatolica* 35: 85–152.

Pfaffenberger, B.

1992 "Social Anthropology of Technology." *Annual Review of Anthropology* 21: 491–516.

Poidevin, Jean-Louis

1998 "Les gisements d'obsidienne de Turquie et de Transcaucasie: Géologie, géochimie et chronométrie." In *L'obsidienne au Proche et Moyen Orient: Du volcan à l'outil*, edited by M.-C. Cauvin, A. Gourgaurd, B. Gratuze, N. Arnaud, G. Poupeau, J.-L. Poidevin, and C. Chataigner, pp. 105–204. British Archaeological Reports, International Series 738. Oxford: Archaeopress.

Renfrew, Colin

1977 "The Later Obsidian of Deh Luran: The Evidence of Chagha Sefid." In *Studies in the Archeological History of the Deh Luran Plain: Excavation of Chagha Sefid*, edited by F. Hole, pp. 289–311. Memoirs of the Museum of Anthropology 9. Ann Arbor: University of Michigan.

Renfrew, Colin, and J. Dixon

1976 "Obsidian in Western Asia: A Review. 'Problems in Economic and Social Archaeology.'" In *Problems in Economic and Social Archaeology*, edited by G. de G. Sieveking, I. H. Longworth, and K. E. Wilson, pp. 137–50. London: Duckworth.

Rothman, Mitchell S., editor

2001 *Uruk Mesopotamia and Its Neighbors: Cross-cultural Interactions in the Era of State Formation*. Santa Fe: School of American Research Press.

2002 *Tepe Gawra: The Evolution of a Small, Prehistoric Center in Northern Iraq*. University Museum Monograph 112. Philadelphia: University of Pennsylvania, Museum of Archaeology and Anthropology.

Schmidt, Klaus

1996 *Norşuntepe: Kleinfunde*, Volume 1: *Die lithische Industrie*. Archaeologica Euphratica 1. Mainz am Rhein: Philipp von Zabern.

Stein, Gil J.

1994 "Economy, Ritual and Power in 'Ubaid Mesopotamia." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 35–46. Monographs in World Archaeology 18. Madison: Prehistory Press.

Stronach, David

1961 "Excavations at Ras al 'Amiya." *Iraq* 23: 95–137.

Tobler, Arthur J.

1950 *Excavations at Tepe Gawra*, Volume 2: *Levels IX–XX*. Publications of the Baghdad School, Excavations 1. Philadelphia: University of Pennsylvania Press.

Tusa, S.

1980 "Notes on the Tell Abu Husaini Excavation." *Paléorient* 6: 225–28.

oi.uchicago.edu

van Loon, Maurits N.
1988 *Hammam et-Turkman*, Volume 1: *Report on the University of Amsterdam's 1981–84 Excavations in Syria*. 2 volumes. Leiden: Nederlands Historisch-Archaeologisch Instituut te Istanbul.

Wilkinson, Tony J.
1995 *Settlement Development in the North Jazira, Iraq: A Study of the Archaeological Landscape*. Iraq Archaeological Reports 3. Warminster: Aris & Phillips.

Wilkinson, Tony J.; Belinda H. Monahan; and D. J. Tucker
1996 "Khanijdal East: A Small Ubaid Site in Northern Iraq." *Iraq* 58: 17–50.

Wobst, H. M.
1977 "Stylistic Behaviour and Information Exchange." In *For the Director: Research Essays in Honor of James B. Griffin*, edited by C. Cleland, pp. 317–42. Anthropological Papers 6. Michigan: Museum of Anthropology, University of Michigan.

Woolley, C. Leonard
1929 "Excavations at Ur. 1928–1929." *Antiquaries Journal* 8: 415–48.
1930 "Excavations at Ur. 1929–1930." *Antiquaries Journal* 10: 316–43.
1932 "Excavations at Ur. 1931–1932." *Antiquaries Journal* 12: 355–92.
1934 "Excavations at Ur. 1933–1934." *Antiquaries Journal* 14: 355–78.
1955 *Ur Excavations*, Volume 4: *The Early Periods*. Philadelphia: University Museum Philadelphia; London: British Museum.

Wright, H. E.
1955 "Geologic Aspects of the Archaeology of Iraq." *Sumer* 11: 83–91.

Yener, K. Aslıhan; Christopher Edens; Jesse J. Casana; B. Diebold; H. Ekstrom; M. Loyet; and Rana Özbal
2000 "Tell Kurdu Excavations 1999." *Anatolica* 26: 31–118.

Zambello, M.
2004 "The Use of Obsidian and Flint at Prehistoric Yumuktepe: An Overview." In *Mersin-Yumuktepe: A Reappraisal*, edited by I. Caneva and V. Sevin, pp. 143–51. Galatina (Lecce): M. Congleo.

Zarins, Juris
1989 "Ancient Egypt and the Red Sea Trade: The Case for Obsidian in the Predynastic and Archaic Periods." In *Essays in Ancient Civilization Presented to Helene J. Kantor*, edited by A. Leonard and B. B. Williams, pp. 339–68. Studies in Ancient Oriental Civilization 47. Chicago: The Oriental Institute.

oi.uchicago.edu

14

BUTTRESS-RECESS ARCHITECTURE AND STATUS SYMBOLISM IN THE UBAID PERIOD

UWE SIEVERTSEN, *University of Tübingen*

INTRODUCTION

In Near Eastern archaeology, the Ubaid period is crucially important as the transition between early villages and complex urban societies.[1] Some areas of the Ubaid world afford evidence of two-tier settlement systems with dominant centers and subordinate villages. Occasionally, settlement structures, particular architectural characteristics, and distinct room inventories suggest the existence of residential buildings of different social statuses. Public edifices, often highly elaborated and equipped with finely crafted objects, seem to indicate early institutions of centralized economic and political control. Several such buildings were erected on platforms and thus represent landmarks visible from a long distance. Moreover, patterns of variability in the design and use of stamp seals offer clues to differential administrative control, featuring ordinary sealing personnel and a small number of officials apparently responsible for an exceptionally large share of authorized sealing.

At the same time, there is a conspicuous lack of exotic prestige goods as status markers in Ubaid contexts. Numerous researchers take this as a pointer that the Ubaid economy, although basically a tribute system associated with small localized chiefdoms, functioned through staple rather than wealth finance. However, with one possible exception, the burial customs also seem to indicate only minor social distinction. In view of this inconsistency, some archaeologists interpret Ubaid societies in a different way, as essentially egalitarian communities without any structured ranking or hierarchy. Yet, one can also reason that the wide-ranging absence of any open display of wealth resulted from a conscious choice of the Ubaid elites to maintain a facade of social equality, tying together notables and common folk in an all-embracing corporate group identity. Even if the archaeological record is in parts ambiguous, today most scholars accept that at least the late phases of the Ubaid period show the beginnings of social stratification and varied access to items of wealth and symbolic status. It nevertheless seems clear that at the same time the majority of Ubaid households, regardless of status differences, still participated in ordinary agrarian production (Redman 1978: 205–06, 214ff.; Hole 1983: 315ff., 1987: 86ff., 1990: 1ff.; Bernbeck 1994: 344, 1995a: 46ff.; Huot 1994: 182; Stein 1994: 35ff.; Breniquet 1996: 123; Sievertsen 1998: 301–02, 1999: 16ff.; Pollock 1999: 79–81, 83ff., 114ff.; Rothman 2001: 371, 378ff., 386ff.; Sauvage 2001: 427ff.; Akkermans and Schwartz 2003: 158, 172, 177ff.; Butterlin 2009a: 1ff.).

Turning now to our subject in the narrower sense — that is, buildings with buttresses and recesses — we note that since the sixth millennium B.C., and perhaps even earlier, buttress-recess arrangements were a widespread feature in the mudbrick architecture of the ancient Near East (fig. 14.1). One major topic in the study of these arrangements, besides their technical and formal aspects, is their symbolic value, which has to be investigated with a diachronic perspective and against the background of the architectural setting and specific placement and design of the elements in question (Broadbent, Bunt, and Jencks 1980; McGuire and Schiffer 1983: 277ff.; Aurenche 1996: 5ff.; Forest 1997: 217ff.; Collins 2000: 6ff., 43, 45; Pütt 2005: 194ff.). During the Ubaid period, a development can be noticed that is of general interest for the sociocultural history of ancient Mesopotamia. In my paper I illustrate this development by discussing instances of buttress-recess architecture from different parts of Mesopotamia, Syria,

[1] The term "Ubaid" is taken by me both to denote a time period and to describe an interaction sphere incorporating substantial regional and local variability, in the sense of Gil Stein's definition at the Durham conference (see Stein this volume). See also Hole 2000: 21–22; Arzt 2001: 1ff., 144ff., 290ff.; Nissen 2001: 167ff.; Akkermans and Schwartz 2003: 154ff.; Butterlin 2003: 186ff.

oi.uchicago.edu

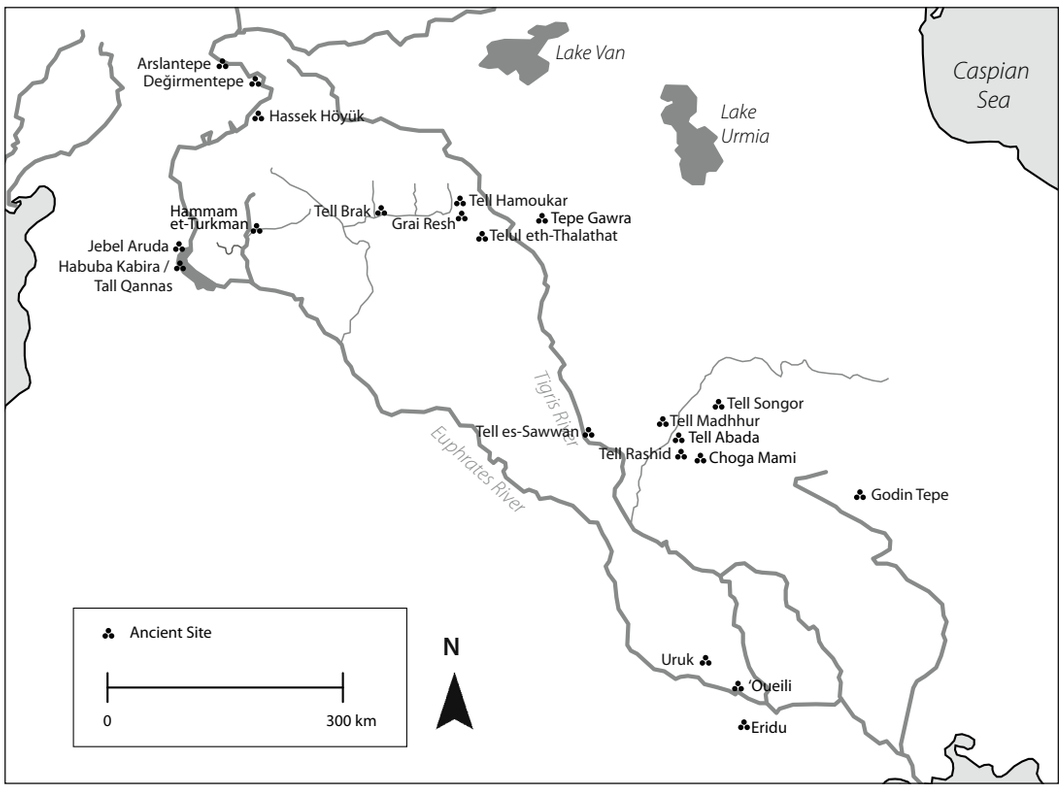


Figure 14.1. Sites with early buttress-recess architecture

Turkey, and Iran. I concentrate mainly on the Ubaid period, but by way of comparison examples of buttress-recess architecture of the Samarra, post-Ubaid, and Uruk periods are also taken into consideration.

DEVELOPMENTAL OUTLINE

Let me start with an outline of the development of early buttress-recess architecture (for more detail, see Sievertsen 1998: 300ff.). A first development stage, corresponding to the Samarra period,[2] is characterized by the common and indiscriminate association of buttress-recess arrangements with the facades of residential buildings and their annexes. A typical example of this phase is provided by the village architecture of level IIIA at Tell es-Sawwan (fig. 14.2), with its "bound" wall projections regularly appearing where the inner walls abut the outer walls of the edifices (Al-A'dami 1968: 58–59, photos 1–3; es-Soof 1968: 4–5, 12–13, pl. 2, pl. 6:2, pl. 7:1–2, pl. 8:1–3, 1971: 3–4, 6, pl. 8:1–2, pl. 14:1–2; Yasin 1970: 4–7, 11, figs. 2–8; Forest 1983a: 10ff.; Heinrich 1984: 4ff.; Margueron 1989: 44ff.; Breniquet 1991: 75ff., 1992: 5ff., 2000: 61ff.; Eichmann 1991: 64ff.; Bernbeck 1994: 171ff., 240ff., 295ff., 1995b: 33–34; Huot 1994: 100–01; Youkana 1997: 1ff.; Sievertsen 1998: 137ff., 262–63). Further evidence of the "bound" type of buttress-recess arrangements comes from Chogha Mami and Tell Songor A (Oates 1969: pl. 24; Fujii 1981: figs. 27–28).

During the Ubaid period, the buttress-recess arrangements on the outer walls of domestic buildings slowly diminish. At the same time, the correspondence of the buttresses to the inner walls gradually disappears. The houses of levels XIX–XVA at Tepe Gawra provide an example (fig. 14.3), dating to the Early and Middle Northern Ubaid period (Tobler 1950: 36ff., pls. 16–20, 41, 43–44; Killick and Roaf 1979: 542; Huot 1994: 188; Sievertsen 1998: 185, 277–78; Akkermans and Schwartz 2003: 161). This dating is equivalent to the Ubaid 3 period in the southern Mesopotamian sequence (Oates 1987: 476, 479, table 1; Akkermans 1988: 109ff.; Porada et al. 1992: fig. 3; Gut 1995: 193–94, 203–04, 218, 223, 284, tables 20, 30).

[2] For calibrated radiocarbon age determinations of the Samarra period, see Sauvage 2001: 425.

oi.uchicago.edu

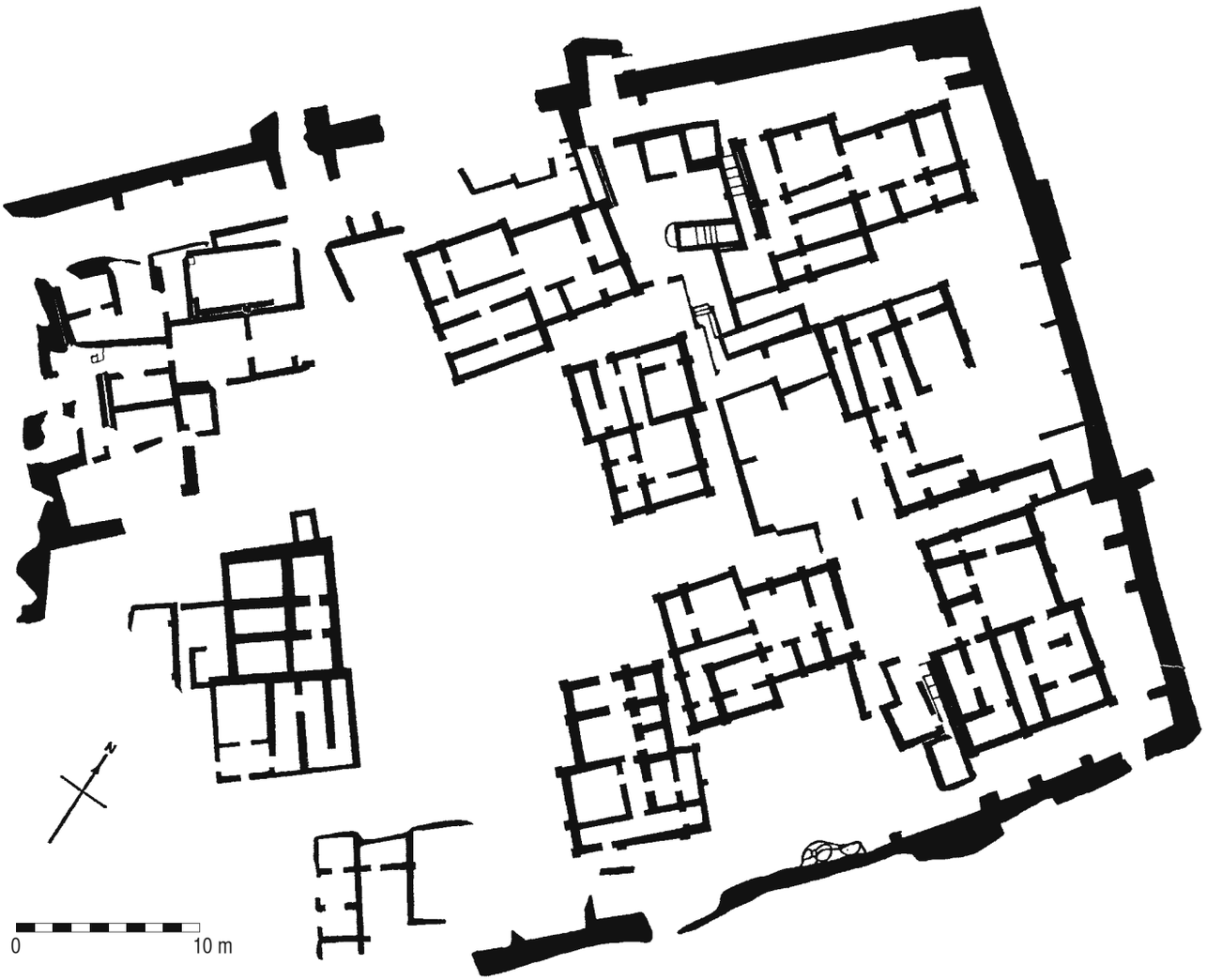


Figure 14.2. Tell es-Sawwan, level IIIA (after Yasin 1970: pl. 1)

Figure 14.3. Tepe Gawra, level XVIII (after Tobler 1950: pl. 19)

oi.uchicago.edu

Another stage of development can be identified in level II of Tell Abada, also dating to the Ubaid 3 period (fig. 14.4). The central household of the village is clearly distinguished from the surrounding houses by the fact that it is the only architectural complex equipped with an all-round alternation of buttresses and recesses on its outer walls (Jasim 1983a: 168, 173–74, 176ff., 184, fig. 7, pl. 22b, 1985: 16, 18ff., 24ff., 141–42, pls. 4–5, 1989: 79ff., figs. 4–6, 8; Oates 1987: 479, table 1; Eichmann 1991: 101; Bernbeck 1994: 344, 1995a: 46–47; Huot 1994: 190–91; Sievertsen 1998: 146ff., 265; Pollock 1999: 85–86).

Finally, during the Ubaid 4 period, the so-called Tempel I in the Anu precinct of Uruk (fig. 14.5) displays for the first time doubly and triply recessed niches both on its facades and in its main hall (Schmidt 1974: 173ff., fig. 2, pl. 21; Heinrich 1982: 32–33; Forest 1987a: 394ff.; Margueron 1987: 354, 362; Eichmann 1989: 167 suppls. 84–85; Huot 1994: 163ff.; Sievertsen 1998: 30ff., 241ff.). The contemporary acropolis of level XIII at Tepe Gawra likewise represents an exceptional building ensemble of the Late Northern Ubaid period (fig. 14.6), provided with almost perfectly harmonized doubly recessed wall ornaments giving the individual edifices, their interiors, and the central open space an air of special significance (Tobler 1950: 23, 30ff., pls. 11–13, 38–39; Aurenche 1981: 224–25;

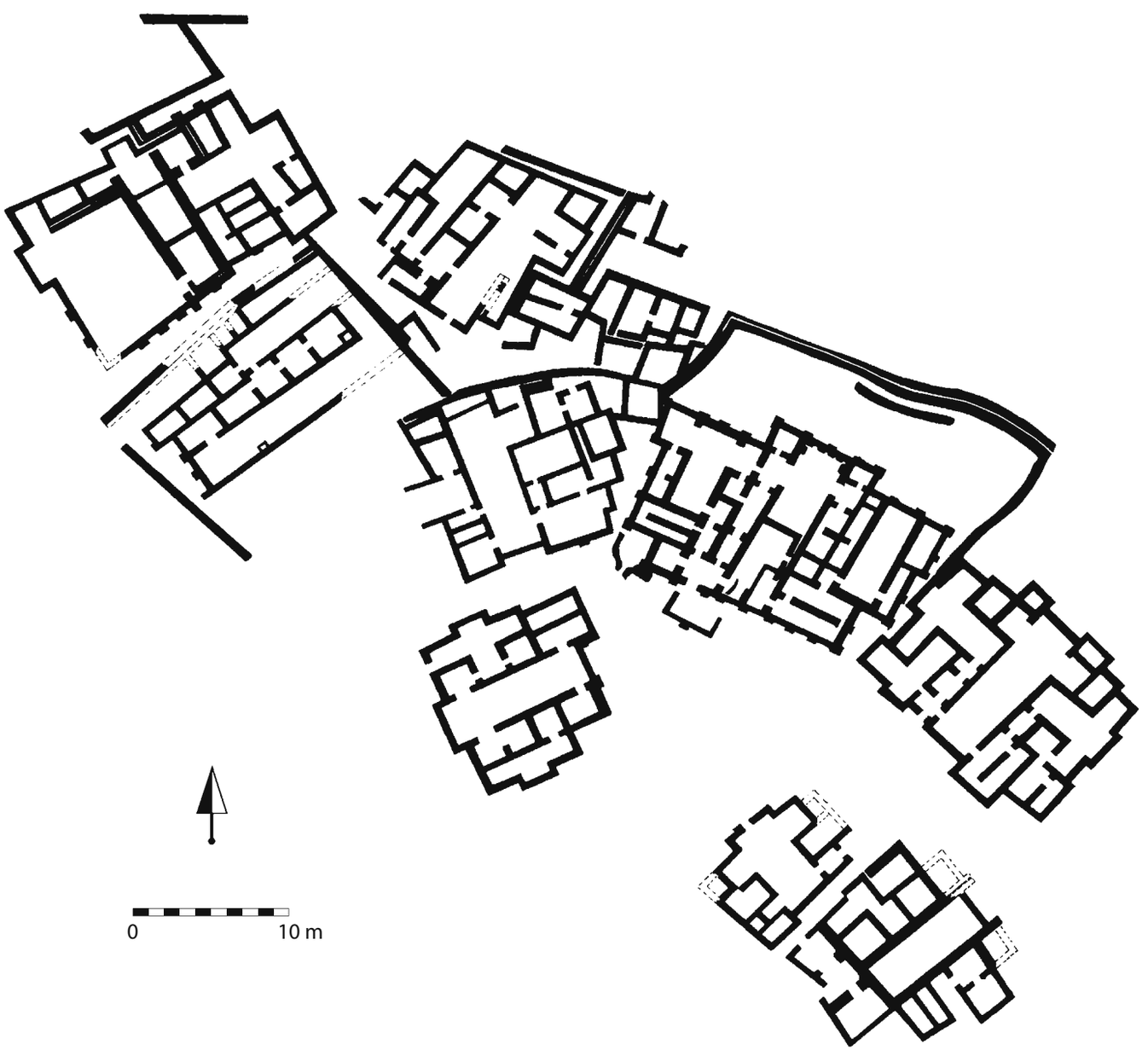


Figure 14.4. Tell Abada, central building A, level II (after Jasim 1983a: fig. 7)

oi.uchicago.edu

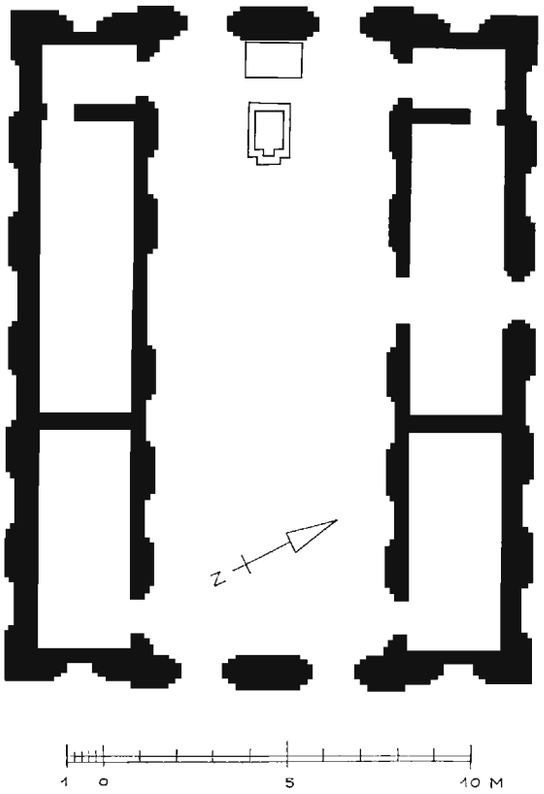


Figure 14.5. Uruk, Anu precinct, restored groundplan of Tempel I (after Schmidt 1974: fig. 2)

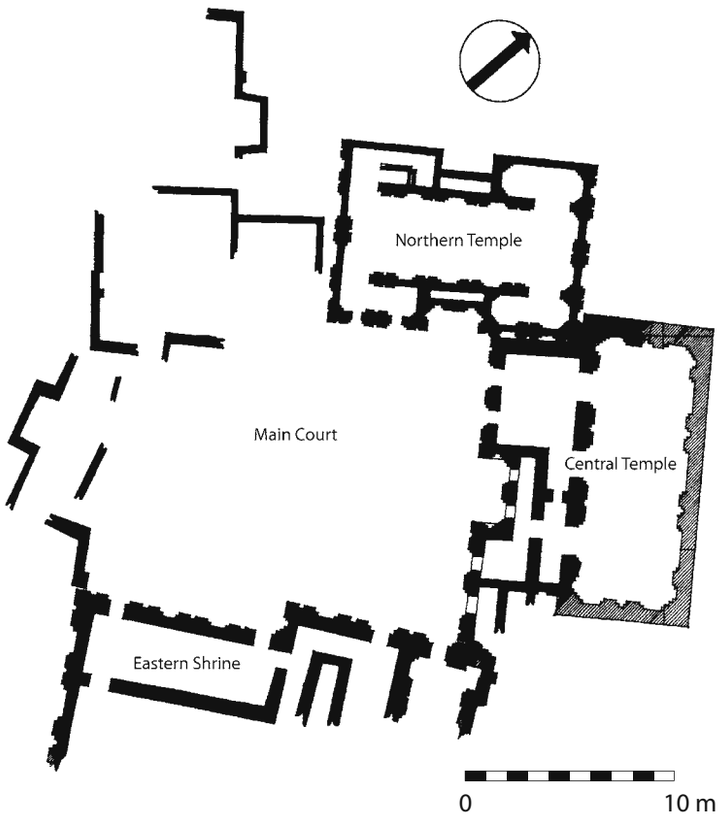


Figure 14.6. Tepe Gawra, acropolis of level XIII (after Tobler 1950: pl. 11)

Heinrich 1982: 30ff.; Forest 1987a: 385ff., 1993: 179–80; Margueron 1987: 376, 2006: 195ff., 2009: 63, fig. 20; Oates 1987: 479, table 1; Eichmann 1991: 96ff.; Huot 1994: 188ff.; Gut 1995: 225–26, 231, tables 21–22, 25, 30; Breniquet 1996: 118; Sievertsen 1998: 185ff., 278ff.; Rothman 2009: 19, 23, 27–28, figs. 2, 4–5). In contrast, an ordinary Ubaid 4 residential building at Tell Madhhur (fig. 14.7) illustrates a noticeable reduction of the buttress-recess arrangements to single simply recessed niches in the two end walls of its main hall (Killick and Roaf 1979: 542–43; Roaf 1982: 41ff., figs. 28–30, 1984: 122ff., figs. 7–8, 1987: 425ff., 1989: 91ff.; Huot 1994: 196–97; Bernbeck 1995a: 45–46; Sievertsen 1998: 153, 266–67; Pollock 1999: 83–84).

This outline demonstrates that in the Samarra period the buttress-recess arrangements still appear to be fundamentally unrelated to social prestige. In a basically egalitarian society, this is, of course, unsurprising. During the Ubaid period, however, a gradual decline of buttress-recess facade decoration takes place, and by the time of the Ubaid 4, we come across residential buildings with no facade ornaments at all, which instead show symmetrically arranged interior niches in the end walls of their main halls. Meanwhile, in the Ubaid 3, we can observe the first unequivocal record of the use of buttresses and recesses to set a single edifice apart from other architecturally comparable edifices. Not much later we witness a remarkable technical refinement of the buttress-recess arrangements of certain buildings in both southern and northern Mesopotamia. A distinct pleasure can be sensed in the creation of new and unconventional formal solutions, which unmistakably points to the work of specialists.

In view of the evidence cited above, complemented by other examples, it is possible to distinguish at least three different categories of architecture, corresponding to levels of social prestige. There seems to be one level of restricted, a second of elevated, and a third of high prestige. These architectural levels develop successively, and their particular status is mirrored by the edifices themselves, as well as by the buttress-recess arrangements. Formerly merely reinforcements of the walls and rather non-specific decorative elements based on the play of light and shade, the buttress-recess arrangements thus little by little turn into a complex sign system. During the fifth and the early fourth millennia B.C., this system spread over the whole of Mesopotamia and beyond, later becoming determinative in the symbolic code of Uruk-period buttress-recess architecture.

oi.uchicago.edu

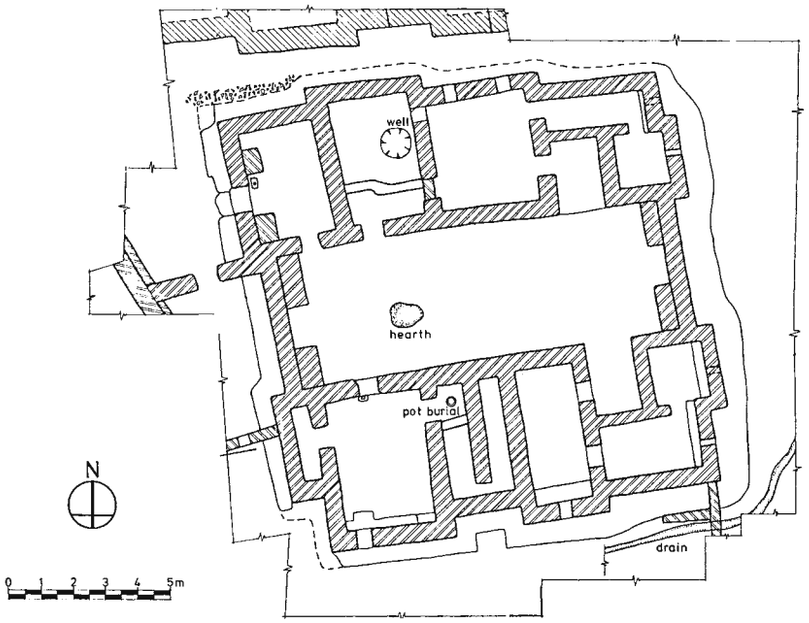


Figure 14.7. Tell Madhhur, Ubaid level 2 house (after Roaf 1984: fig. 7)

In the next section I try to place more examples of early buttress-recess architecture into this development scheme. While doing so, I tentatively correlate the three inferred levels of social prestige with a private sphere, a semi-official sphere, and an official sphere of buttress-recess architecture. Architecture of restricted and high prestige is discussed first, followed by the intermediate level of elevated prestige, which is more difficult to define.

BUTTRESS-RECESS ARCHITECTURE OF RESTRICTED PRESTIGE

INTERNAL END-WALL NICHES

I begin with the buildings of restricted prestige, that is to say the presumed private sphere. The simple pattern of symmetrical end-wall niches located in the main hall, as exemplified by the tripartite building at Tell Madhhur (fig. 14.7), is also well attested in other domestic contexts at the close of the Ubaid period. Apparently the niche arrangements were supposed to emphasize preferential residential zones within the houses (Sievertsen 1998: 11, 302). Normally in these examples the end-wall niches appear in twos.

Several instances of low end-wall niches are known from Değirmentepe in the eastern Anatolian province of Malatya. In the Late/Terminal Northern Ubaid layer 7 of that site, the well-preserved tripartite units DU, EL, FC, GK, and I all show niche pairs in the southwestern short walls of their central rooms (fig. 14.8). Albeit clearly multifunctional, these buildings are basically of residential character (Esin 1983: 175ff., fig. 4, pl. 34:3, 5, pl. 35:1–2, 1994: 59ff., figs. 2, 4; Huot 1994: 194; Arzt 2001: 61, 82; Helwing 2003a: 57ff., 2003b: 71ff.; Gurdil 2005: 58, 94, 122, 128, 137, pls. 4, 7, 22–23, 39, 44).

End-wall niches dating to the Terminal Northern Ubaid period are attested in the main hall of the tripartite construction C at Telul eth-Thalathat (fig. 14.9). The finds from construction C, among them an alabaster vessel fragment and two mace-heads, as well as stone and bone axes, could indicate the residence of a well-to-do person. While the niches of the southwestern wall are clearly discernible, the niche arrangement of the northeastern wall has been obliterated by the subsequent construction of an oven (Egami 1958: 4–5, figs. 5, 24–25, pls. 7:2, 9:1, 10:1, 14, 16, 17:1, and insert; Fukai, Horiuchi, and Matsutani 1970: 9, table 1; Heinrich 1984: 7; Gut 1995: 237–38, 248, 284, tables 24–25, 30, 2002: fig. 20; Sievertsen 1998: 206–07, 282–83, 2005: 404).

Other instances of Terminal Northern Ubaid end-wall niches are provided by two large tripartite houses exposed in level XII of Tepe Gawra, namely, the White Room Building and the "Building Formed of Rooms 25–31"

oi.uchicago.edu

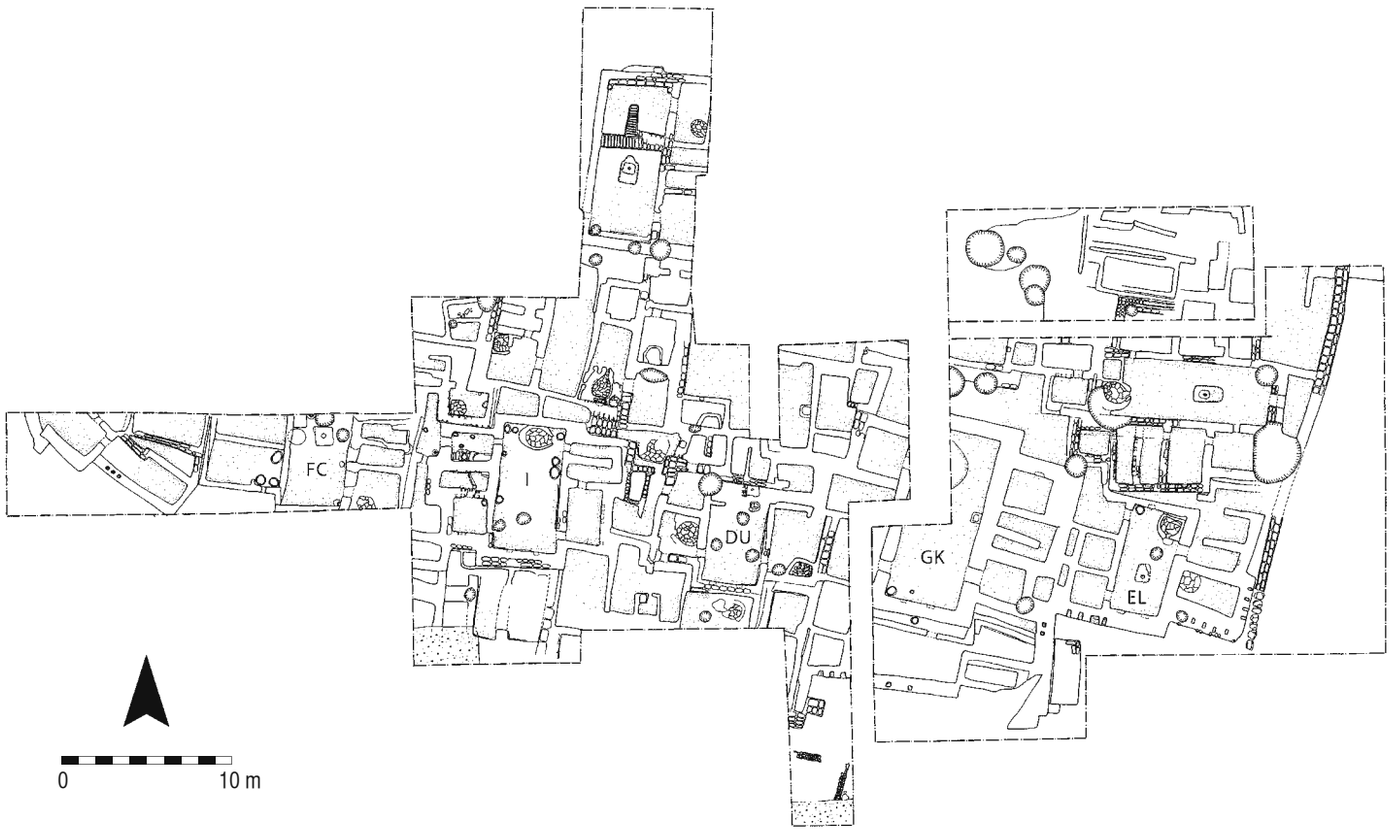


Figure 14.8. Değirmentepe, Chalcolithic buildings (after Gurdil 2005: pl. 4)

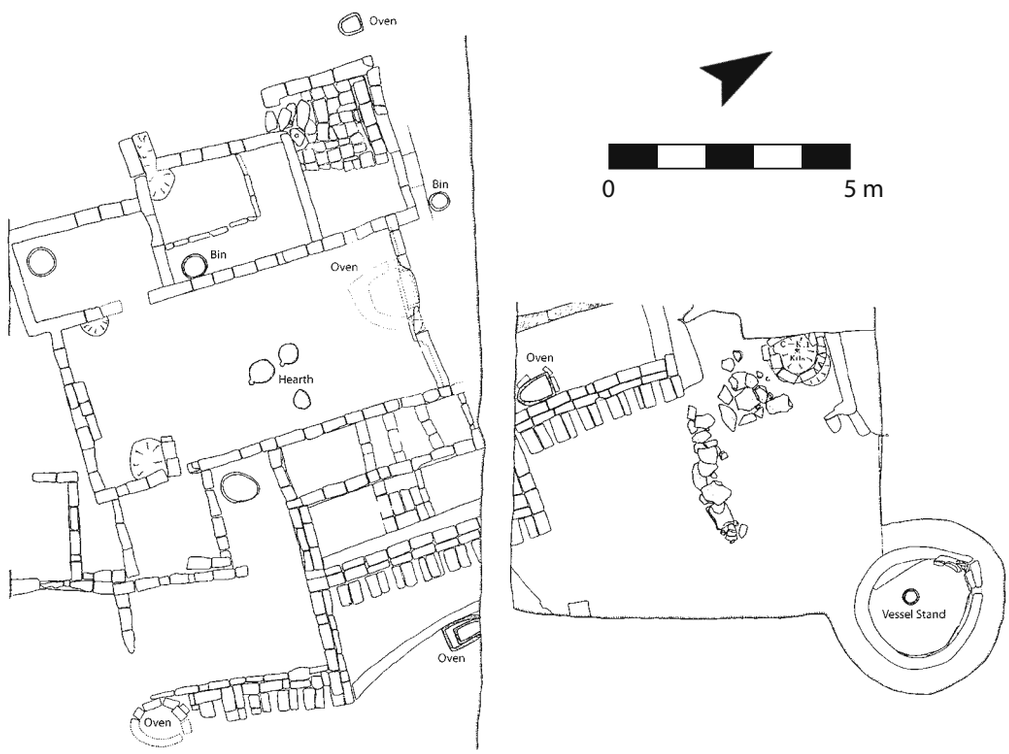


Figure 14.9. Telul eth-Thalathat, construction C (after Egami 1958: fig. 25)

oi.uchicago.edu

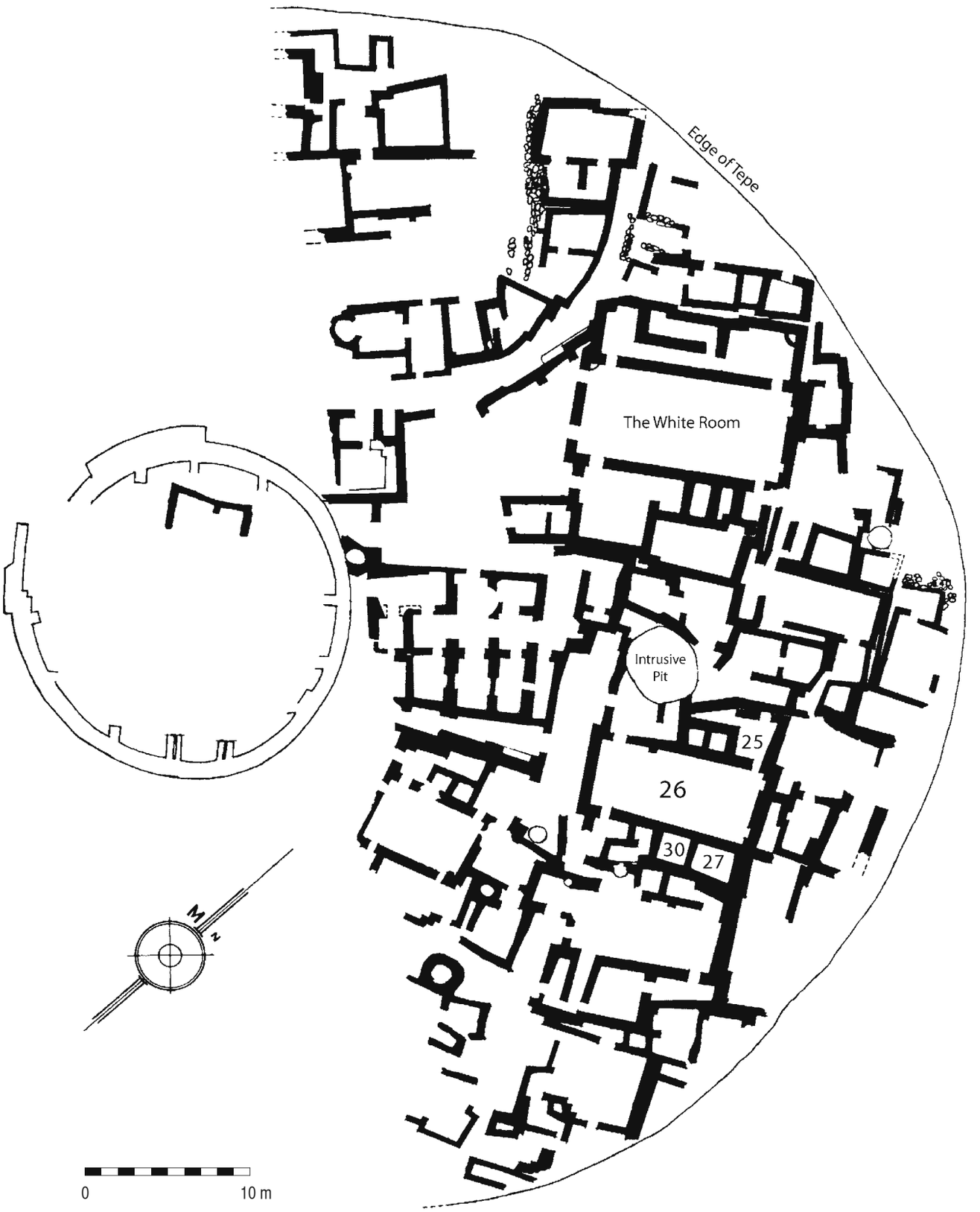


Figure 14.10. Tepe Gawra, level XII (after Tobler 1950: pl. 8)

oi.uchicago.edu

(fig. 14.10). Both structures contained rich inventories and can be seen as civic buildings, most probably as dwellings of notables (Tobler 1950: 27–28, pls. 8–9, 36a; Huot 1994: 194–95; Gut 1995: 225ff., 231ff., 248, tables 21–22, 25, 30, 2002: fig. 20; Sievertsen 1998: 191ff., 280; Forest 2001: 181, fig. 3; Oates 2002: 111; Rothman 2002: 75ff., 2009: 23, fig. 6, top; Butterlin 2006: 41ff., 2009b: 150–51, figs. 1–2; Margueron 2009: 53–54, 61ff., fig. 20).

End-wall niches remained popular in post-Ubaid times, during the Gawra period and Phases A and B of the Northern Uruk period (for the chronological terminology, see Gut 2002: 21ff.). Wherever residential buildings are provided with buttress-recess arrangements, they represent an almost canonical decoration pattern. For instance, in the main room of the Western Unit excavated in level V:2 of the Eastern Trench at Tell Hammam et-Turkman, a pair of end-wall niches can be securely reconstructed (fig. 14.11), belonging to the later occupational phase of the building (level V:2b). This partly excavated building appears to have had a tripartite ground plan and can be considered a residential unit. Its inventory belongs to the Gawra period and seems to be roughly contemporary with Tepe Gawra level XIA (Akkermans 1988: 109ff., table on p. 131; Akkermans in van Loon 1988: 310ff., table 53; Meijer in van Loon 1988: 74–75, pls. 23b, 24b; Gut 1995: 257 n. 709; Sievertsen 1998: 207–08, 284).

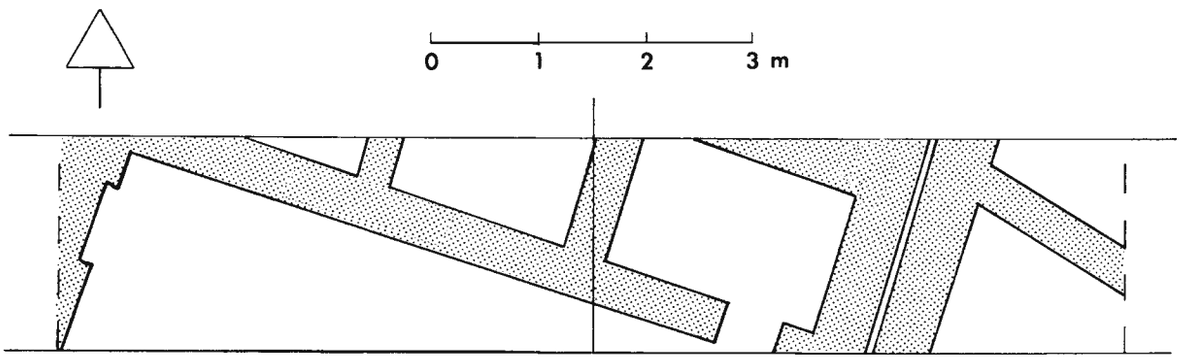


Figure 14.11. Tell Hammam et-Turkman, Eastern Trench, level V:2b (after van Loon 1988: pl. 23b)

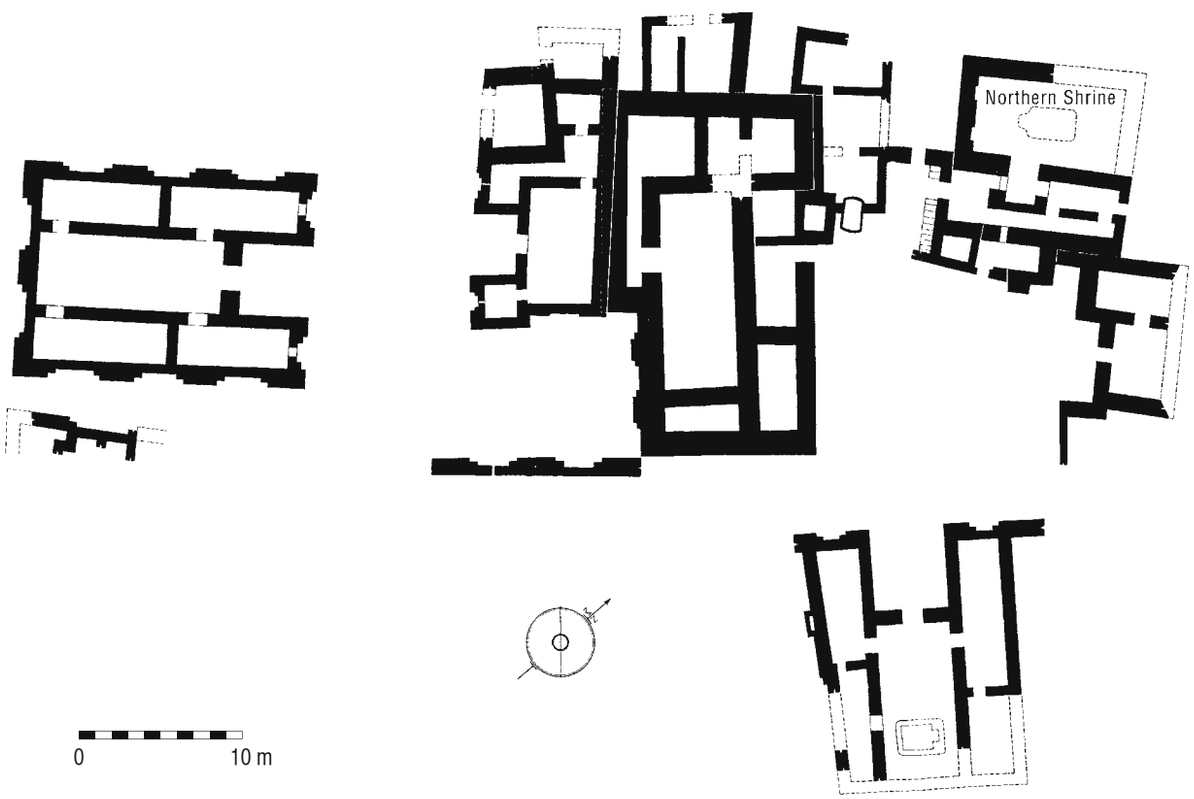


Figure 14.12. Tepe Gawra, level VIIIC (after Speiser 1935: pl. 11)

oi.uchicago.edu

A presumably bipartite building of level VIII, area O–Q 4–5 at Tepe Gawra, which can be assigned to the Northern Uruk A phase, shows two end-wall niches in the preserved southwestern wall of its main hall (fig. 14.12). Further end-wall niches can probably be reconstructed in the eroded northeastern part of the hall. The building has been labeled "Northern Shrine" by its excavators with regard to the presence of the niches and a low hearth in the main room. These criteria, however, are insufficient to define a religious building in Uruk Mesopotamia. As the room inventories point to a residential function, nothing speaks against an interpretation of the Northern Shrine as a residence (Speiser 1935: 24ff., 28–29, 31, 33, pls. 9–11, 14, 15a, 23b, 25b; Heinrich 1982: 88ff., fig. 139; Huot 1994: 203; Gut 1995: 250ff., 261–62, 267–68, 286, tables 26–27, 30, 2002: 20, 22, figs 19, 21; Sievertsen 1998: 199, 202–03, 205, 280ff.; Forest 2001: 183, figs. 6–8; Rothman 2002: 130ff., 2009: 19, fig. 8, bottom; Margueron 2009: 59).

Another example of end-wall niches arranged in pairs can be found at Grai Resh in the tripartite "Private House" of area AB, level II (fig. 14.13). On the basis of its pottery assemblage, the building is chronologically linked to Tepe Gawra level VIII (Lloyd 1940: 13ff. figs 2, 8; Gut 1995: 238ff., 252, 261–62, tables 27, 30, 2002: 20, 22, figs. 19, 21; Sievertsen 1998: 280).

At Tell Brak the halls of two of the area TW level 16 houses show pairs of end-wall niches (fig. 14.14). The buildings are roughly contemporary with the architecture of level VIII at Tepe Gawra. Chiefly because of the rather formal character of a row of semi-columns in locus 5, the functional interpretation of the northwestern unit is not wholly clear, but the tripartite house around Hall 12 seems to be an upper-class domestic building (Oates and Oates 1993: 172ff., 181, 183–84, figs. 26–28, 2006: 33, 38–39, fig. 4; Oates and Oates 1997: 289ff.; Sievertsen 1998: 285; Emberling et al. 1999: 2, 6; Gut 2002: fig. 21; Oates 2002: 111, 114, 116; Emberling and McDonald 2003: 8–9, fig. 11).

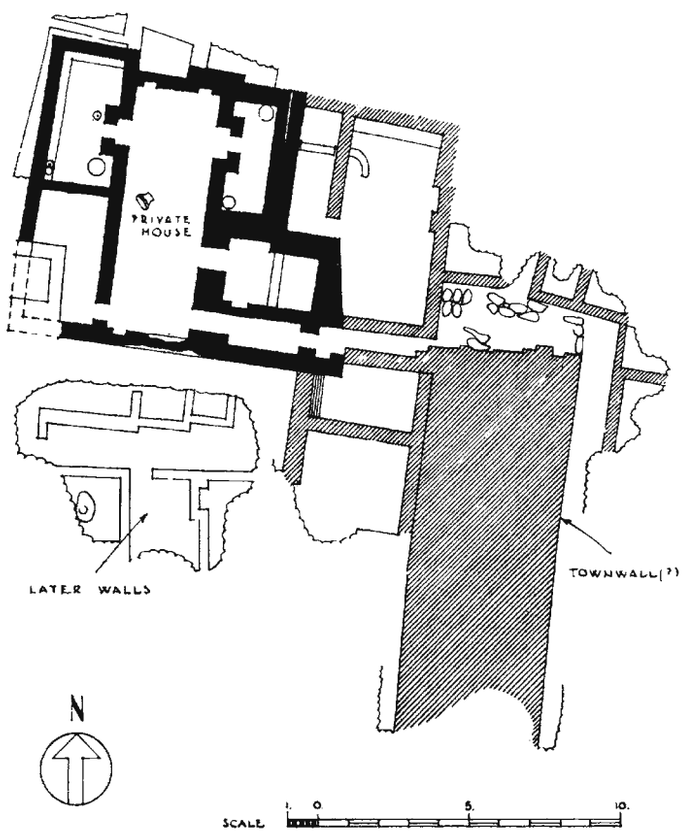


Figure 14.13. Grai Resh, area AB, level II (Lloyd 1940: fig. 2)

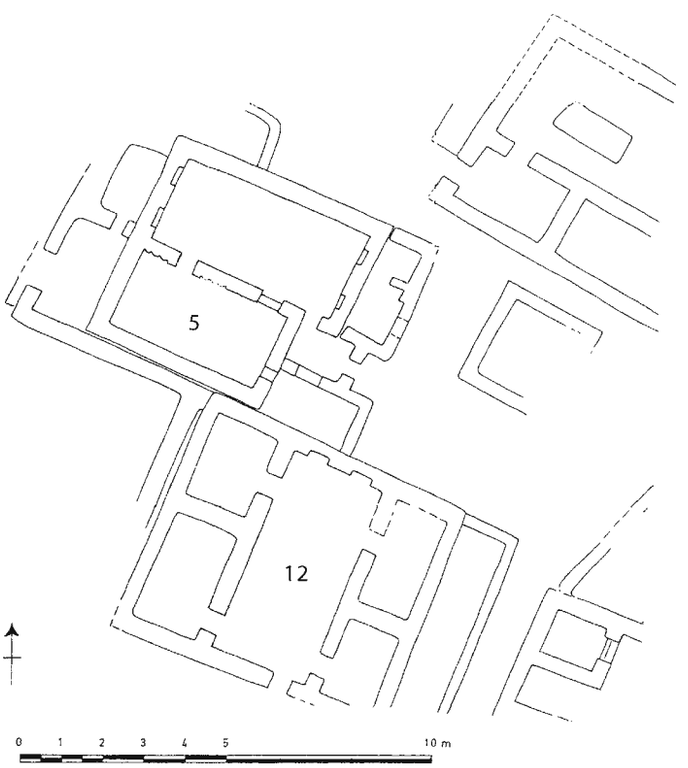


Figure 14.14. Tell Brak, area TW, level 16 (Emberling and McDonald 2003: fig. 11)

oi.uchicago.edu

Moreover, at Hamoukar the Burned Building of area B, a well-built tripartite house not too distant in time from the Grey Brick Stratum of the Eye Temple at Tell Brak,[3] displays two end-wall niches in its main room, Locus 116 (fig. 14.15). In particular, the rooms in the lateral wings of the Burned Building have produced hundreds of artifacts, including pottery vessels and numerous container and door sealings. Soil samples yielding carbonized grain indicate the storage of cereals. Although the excavators have not yet discussed this issue in any detail in the preliminary reports, an interpretation of the Burned Building as a residential unit seems to be absolutely in accordance with the finds (Gibson et al. 2002: 27ff., fig. 21; Reichel 2002: 35ff.).

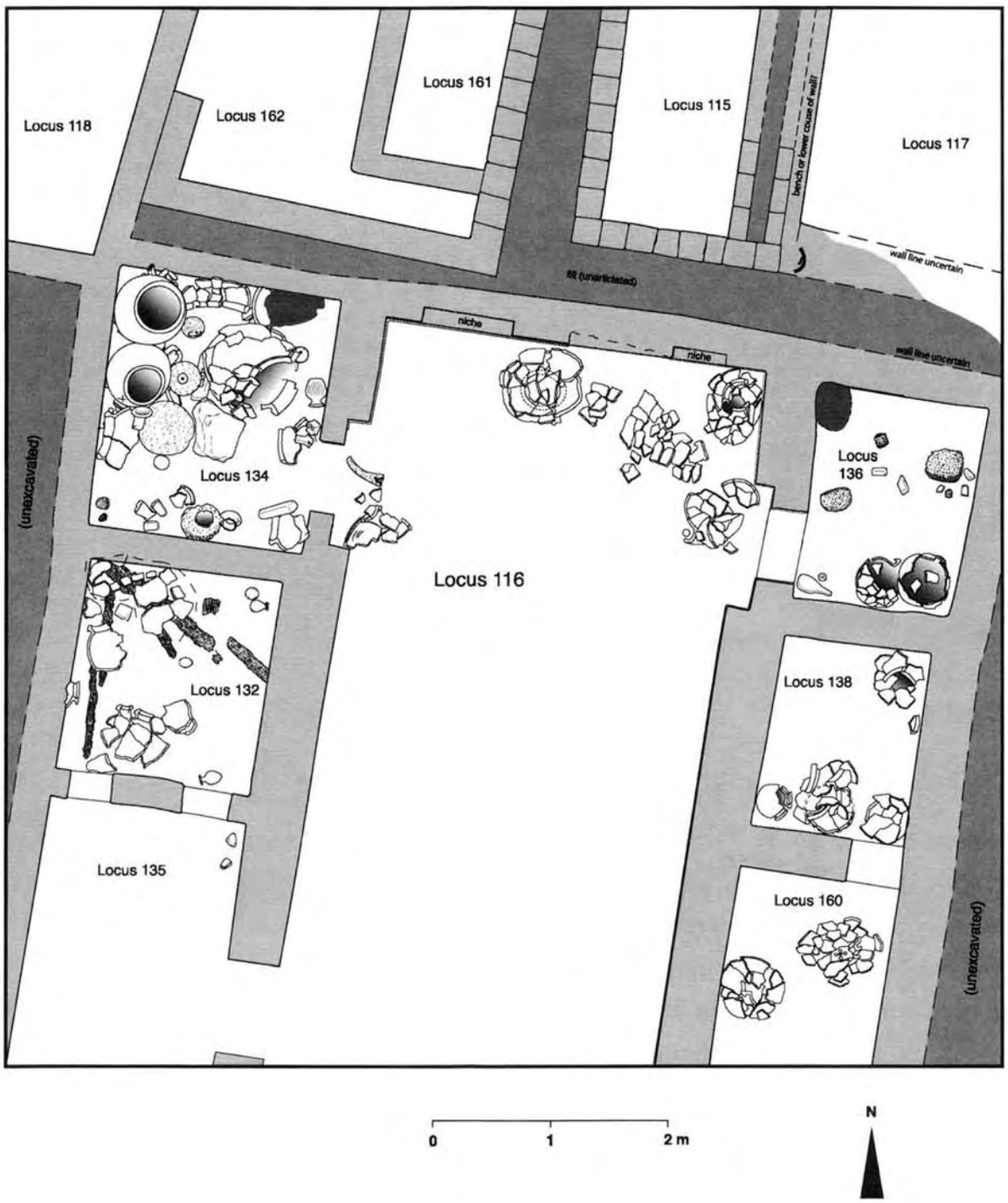


Figure 14.15. Hamoukar, area B (Gibson et al. 2002: fig. 21)

[3] See Gut 2002: fig. 21, for the chronological position of the "Grey Brick Stratum" of the Eye Temple at the end of Gawra VIII and directly thereafter, that is, at the transition from the Northern Uruk A phase to the Northern Uruk B phase.

oi.uchicago.edu

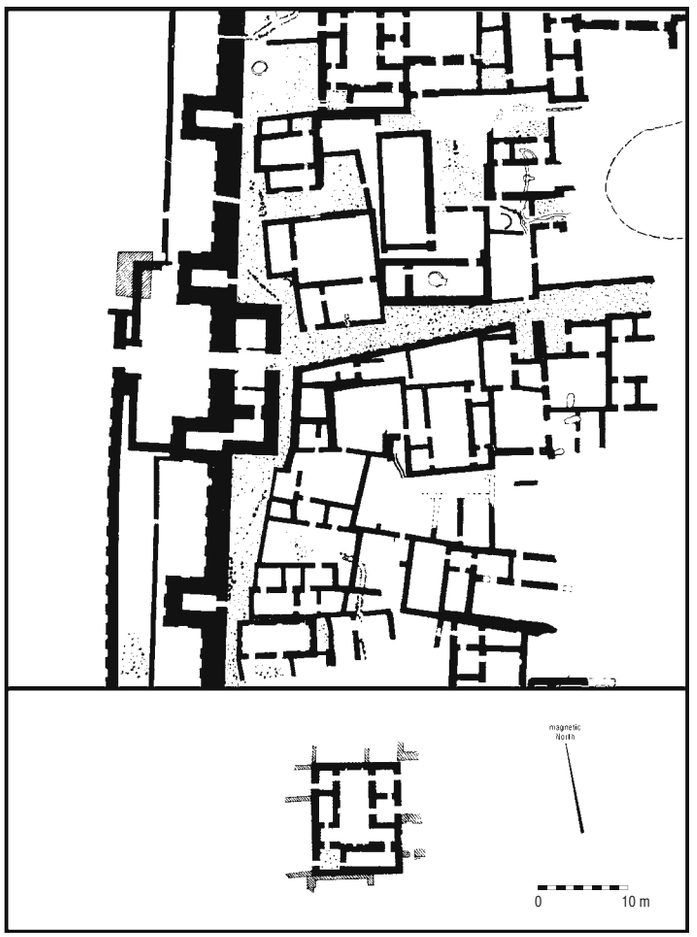


Figure 14.16. Habuba Kabira-South, urban quarter in the area of the Qannas-Tor (top) and middle hall house with T-shaped central hall (bottom; after Ludwig 1980: figs. 2a, 5)

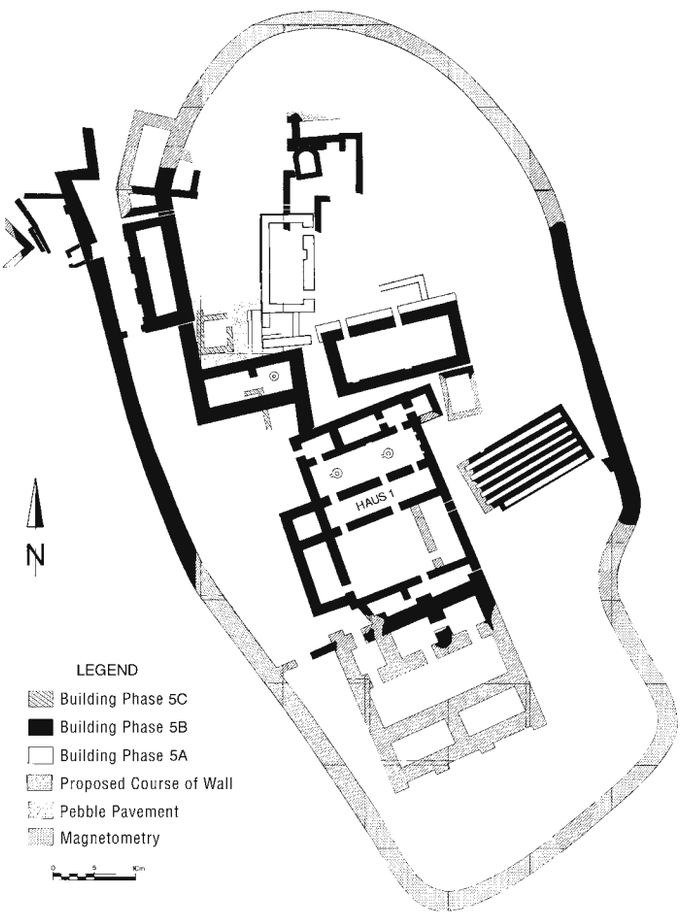


Figure 14.17. Hassek Höyük, settlement of building phase 5B (after Behm-Blancke 1992: pl. 31)

During the Northern Uruk C phase, equivalent to the Late Uruk period, the number of end-wall niches in residential buildings can be raised to three. Furthermore, the niche arrangements in the halls are complemented by niches opposite doorways in the long walls (Sievertsen 1998: 11–12, 303). The niches continue to show only simple recesses, however. One of the numerous tripartite houses exposed at Habuba Kabira may serve as an example (fig. 14.16, bottom). The middle hall shows two niches in its northeastern and three in its southwestern end wall. Furthermore, a niche opposite a doorway can be observed in the northwestern long wall of the hall. A spacious reception room with a reinforced entry wall abutting on the southeastern facade of the tripartite building belongs to the same residential complex (fig. 14.16, top). Like the middle hall house, the reception room has been furnished with end-wall niches and niches opposite doorways (Strommenger 1979: fig. 4, 1980: fig. 15, pl. C: top right; Ludwig 1980: 64, figs. 2a, 5; Kohlmeyer 1996: 92–93, fig. 3e; Vallet 1996: 49, 57ff., figs. 5–7, table 2, 1997: 106–07, figs. 3–4, 7, tables 1–3, 5–7; Sievertsen 1998: 223ff., 294ff.). Another instance of this niche combination in a residential complex of the Late Uruk period is provided by the tripartite unit within Haus 1 of Phase 5B at Hassek Höyük (fig. 14.17; Behm-Blancke 1984: 34ff., figs. 2–3, pl. 3:1–2, 1992: pl. 31; Sievertsen 1998: 303).

External Facade Arrangements

At the outset of this paper, I mention evidence from Tepe Gawra XIX–XVA (fig. 14.3) that illustrates that buttress-recess arrangements still occurred in considerable number on the facades of residential buildings during the middle phases of the Ubaid period, although gradually decreasing. It seems that facade arrangements were also

oi.uchicago.edu

found on domestic buildings during the subsequent Ubaid 4 period, that is, at a time when the first end-wall niches appeared at Tell Madhhur (fig. 14.7). At Tell el-'Oueili the so-called Construction Tripartite and very scanty remains of further building complexes to the southwest and northwest were furnished with buttresses on their outer walls (fig. 14.18). The evidence is not unambiguous, but it could point to the occasional application of buttress-recess facade decorations in ordinary residential contexts during the Late Ubaid period (Huot et al. 1981: 103, fig. 3; Huot 1994: 167–68; Forest 1983b: 71ff., pls. 4, 6, 1987b: 17ff., 1996: fig. 86; Sievertsen 1998: 16ff., 239). In fact, a limited afterlife of facade arrangements on residential buildings can be observed regionally even during the post-Ubaid period (Tobler 1950: 18, pls. 4–6; Sievertsen 1998: 278, 280). This suggests that at the turn of the fifth/fourth millennium B.C., the development of buttress-recess architecture proceeded at different paces within the various parts of Mesopotamia. However, by the time of the Late Uruk period, domestic buildings equipped with buttress-recess arrangements were associated with simple interior niche structures.

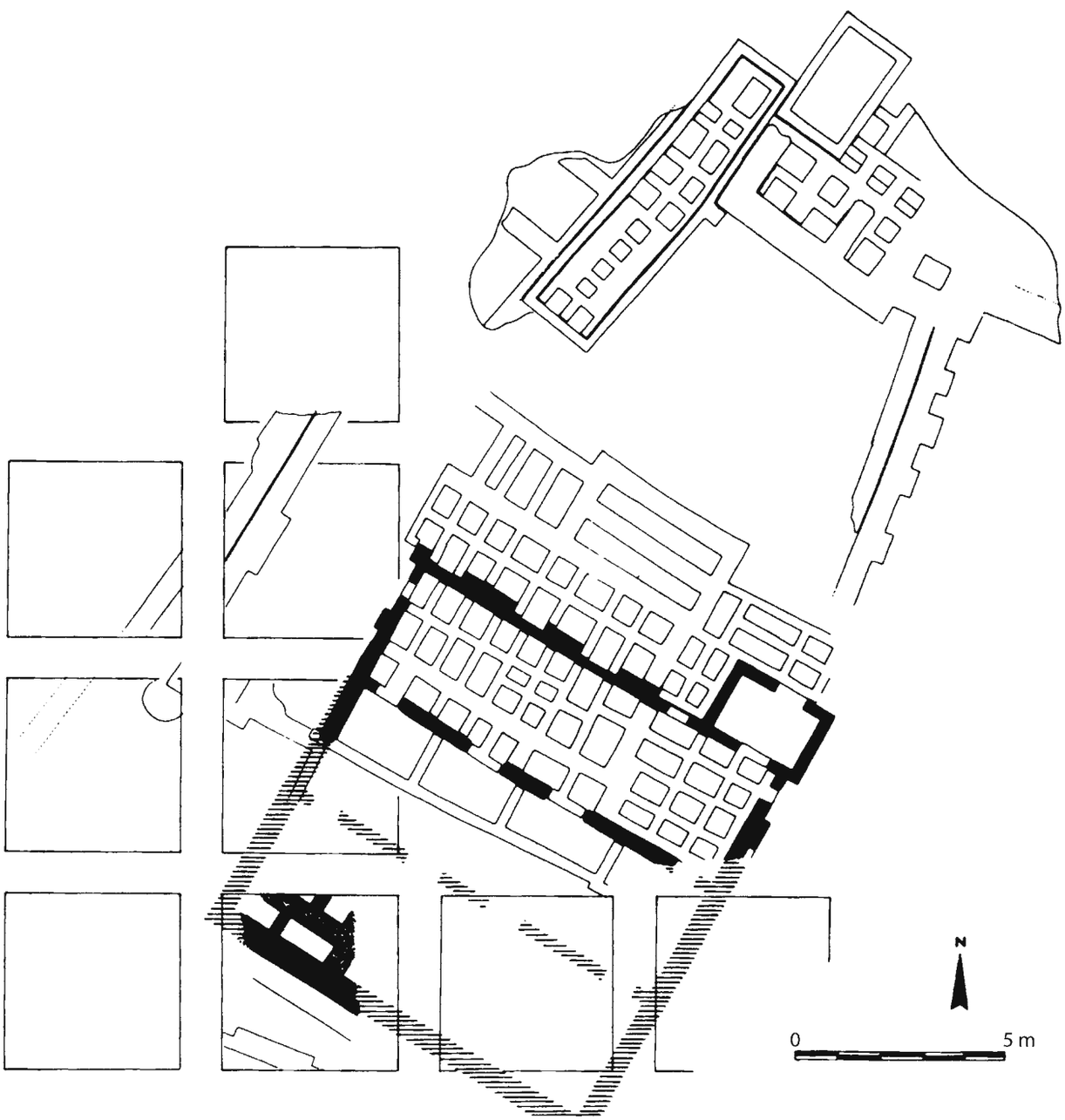


Figure 14.18. Tell el-'Oueili, Construction Tripartite and adjacent buildings (after Forest 1983b: pl. 4)

oi.uchicago.edu

BUTTRESS-RECESS ARCHITECTURE OF HIGH PRESTIGE

The other end of the hierarchical scale of Ubaid buttress-recess architecture is characterized by buildings with very elaborate arrangements pointing to high social prestige. Irrespective of their exact function, these buildings apparently belonged to an official sphere, and it was obviously intended to clearly mark them out as such on their outer facades. To the above-mentioned evidence from Uruk (fig. 14.5) and Tepe Gawra level XIII (fig. 14.6) we can add the architecture of levels VIII–VI in the famous sequence of so-called Prehistoric Temples at Eridu (fig. 14.19, left).[4]

Level VIII can be assigned to the Ubaid 3 period, while levels VII and VI date to the Ubaid 4. The wall ornaments in Eridu do not show multiple recesses, unlike those buildings assigned to the category of high prestige in Uruk and Tepe Gawra. Nevertheless, the architecture of levels VIII–VI as a whole, as well as the buttress-recess arrangements, are definitely much more sophisticated than the edifices and arrangements of the earlier levels XI–IX

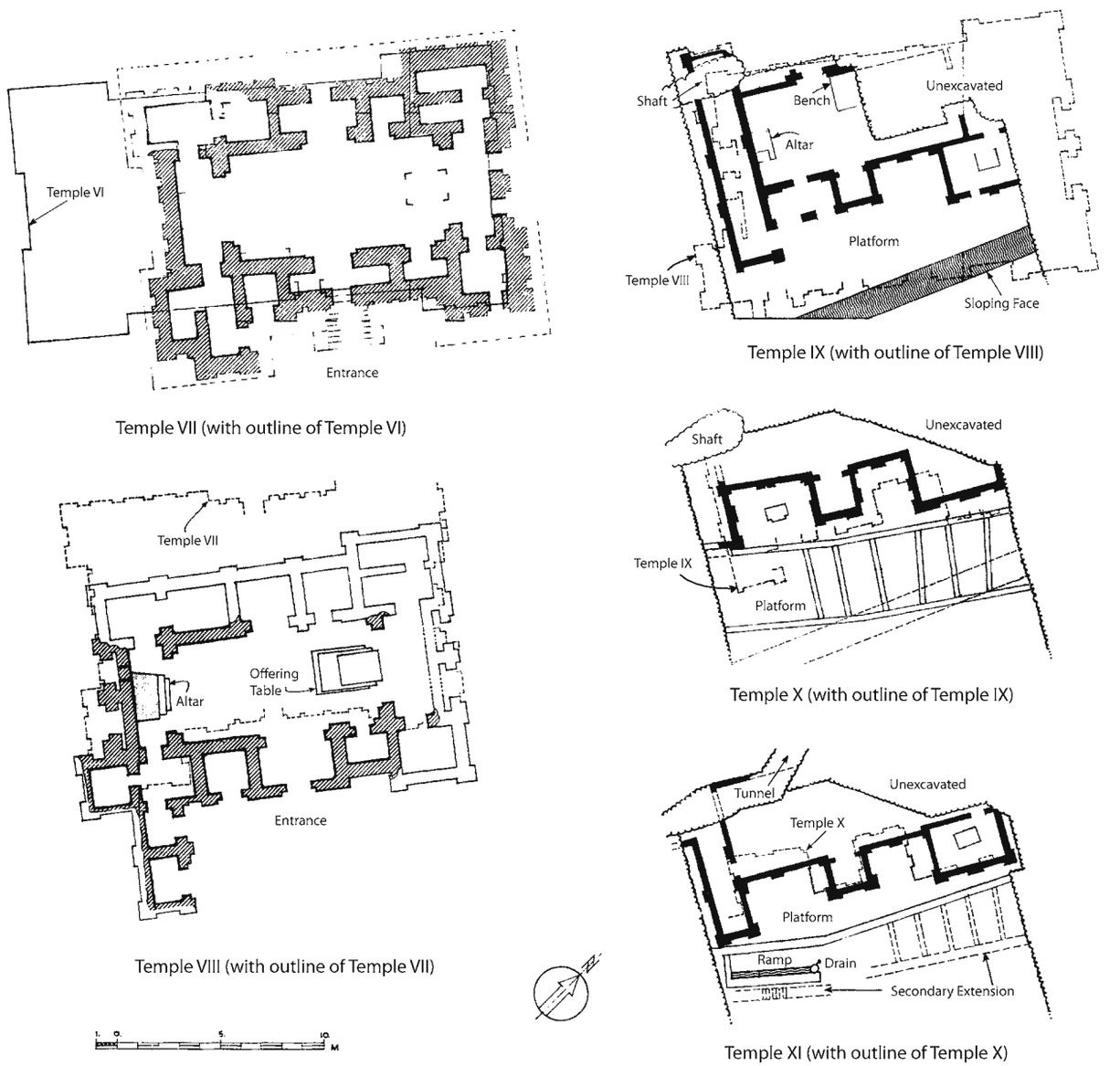


Figure 14.19. Eridu, Prehistoric Temples XI–VII (after Lloyd 1974: pl. 19)

[4] For the groundplan of level VI, see Lloyd 1974: pl. 18.

oi.uchicago.edu

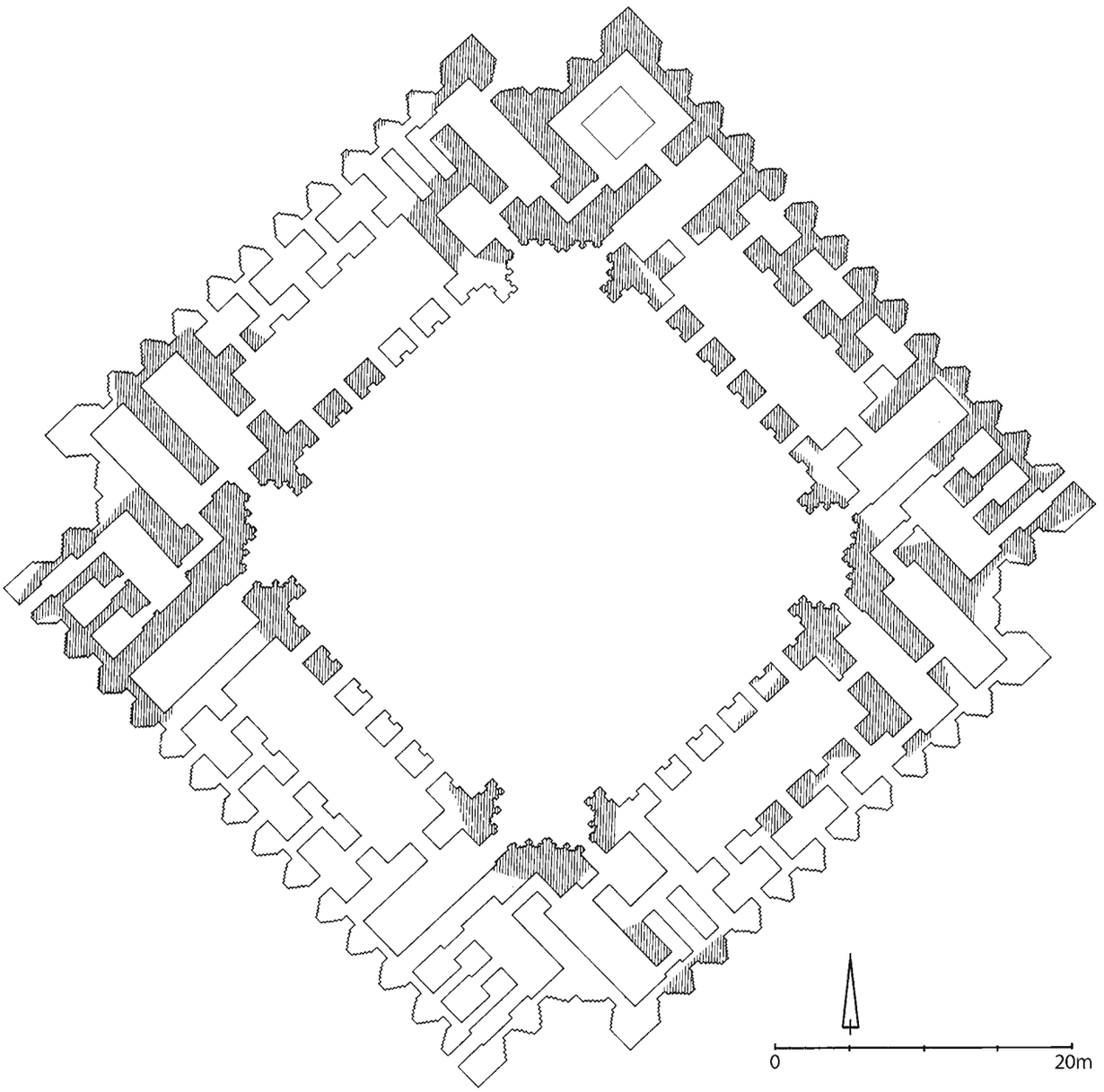


Figure 14.20. Uruk, Eanna precinct, Empfangspalast (Heinrich 1982: fig. 118a)

(fig. 14.19, right), that is, they reflect a much higher amount of labor. I am therefore inclined to think that the buildings of Eridu levels XI–IX represent an architectural level of semi-official character, comparable to a certain degree to the central building A at Tell Abada, level II (fig. 14.4). If this is correct, then the sequence of Eridu should allow us to follow the gradual transformation of an architecture of elevated prestige belonging to a semi-official sphere, into one of high prestige linked to a fully developed official sphere (Lloyd and Safar 1947: 84ff., 1948: 115ff.; Lloyd 1974: 129ff., pls. 18–19; Aurenche 1981: 225; Safar, Mustafa, and Lloyd 1981: 85ff., figs. 44–57; Heinrich 1982: 28–29; Forest 1987a: 385ff.; Margueron 1987: 376, 1989: 59–60; Oates 1987: 479, table 1; Huot 1994: 114–15, 160ff.; Bernbeck 1995a: 48; Sievertsen 1998: 19ff., 239ff.).

In the course of growing monumentalization and canonization during the Uruk period, the buttress-recess arrangements of the official sphere were consistently refined. They are clearly distinguished from the residential architecture, particularly during the Late Uruk period. Thus, in contrast to the buildings of the private sphere, the Late Uruk edifices of the official sphere can show very elaborate buttress-recess arrangements on the outer facades, in the courtyards, and in the interior rooms. As one example among many, I mention the lavish niche architecture of the so-called Empfangspalast (fig. 14.20) in the Eanna precinct at Uruk (Lenzen 1974: 120ff.; Heinrich 1982: 77–78, figs. 115, 118a; Eichmann 1989: suppls. 60, 68; Sievertsen 1998: 61ff., 244ff.).

oi.uchicago.edu

BUTTRESS-RECESS ARCHITECTURE OF ELEVATED PRESTIGE

It is somewhat more difficult to define the intermediate level of Ubaid buttress-recess architecture, but it may be exemplified by the buildings of stratum II at Tell Abada and their buttress-recess arrangements, which are largely restricted to the central household of the settlement (fig. 14.4). I have already suggested that this level corresponds to a sphere of semi-official character. In terms of prestige architecture, the buildings in question oscillate between the private sphere, on one hand, and the official sphere, on the other. As in the case of Eridu (fig. 14.19), this is probably because the architecture of the semi-official sphere played a vital part in the emergence of the imposing official architecture in the latest phases of the Ubaid period, thus representing an interim stage.

A further representative of the semi-official architectural sphere can be seen in the Small Building of level III at Tell Rashid, a little tripartite unit of the Ubaid 3 period on top of the ancient mound (fig. 14.21). Despite its limited size, the edifice is emphasized by means of a rhythmical sequence of simple buttresses on its front wall, while the other buildings of the settlement do not reveal any traces of buttress-recess arrangements. It is conceivable that the Small Building served the occupants of the associated large tripartite building to the south as a kind of guest house. In that way it could represent an early precursor to the characteristic reception rooms of the Uruk period (Jasim 1983b: 99ff., fig. 2, 1985: 143ff.; Porada et al. 1992: fig. 3; Sievertsen 1998: 151, 265–66).[5]

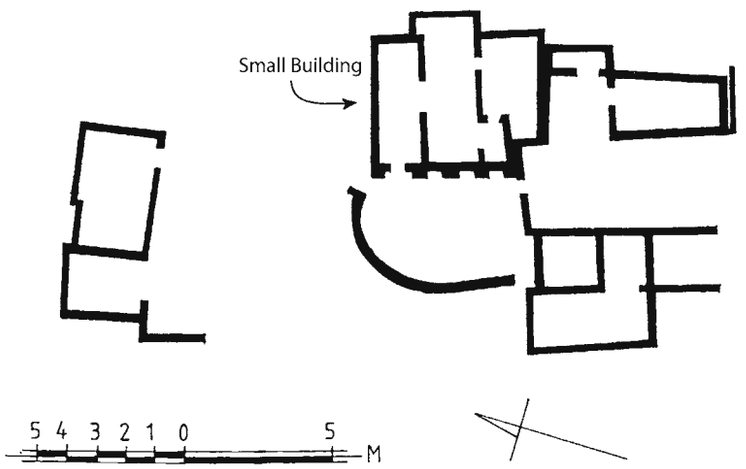


Figure 14.21. Tell Rashid, level III (after Jasim 1983b: fig. 2)

The architecture of the contemporary level XIV settlement of Telul eth-Thalathat, Tell II, Trench IX (fig. 14.22) is broadly comparable to the buildings of Tell Abada and Tell Rashid. Here the so-called construction F4, a thick-walled building at the center of the tell dating to the Early Northern Ubaid period (cf. Ubaid 3 period), is set off against its surroundings through simple buttress-recess arrangements on at least two of its outer walls. The function of construction F4 is not clear, however, and our cautious attribution of the edifice to the semi-official architectural sphere is only founded on its prominent location and conspicuous size (Fukai, Horiuchi, and Matsutani 1970: 5, 13–14, 18ff., pls. 8, 9:2, 10–11, 12a, 66, color pl. 1; Fukai and Matsutani 1981: 19; Porada et al. 1992: fig. 3; Gut 1995: 237; Sievertsen 1998: 206–07, 282).

There are clues in the buttress-recess architecture of the Uruk period that a semi-official sphere of a different kind continued to exist. Certain monumental edifices with rich buttress-recess arrangements in their interiors but not on their exteriors can be mentioned in particular. Examples include the Temple Nord (fig. 14.23) and the Temple Sud (fig. 14.24) on the Acropole Cultuelle at Tall Qannas. The sophisticated niche decorations in the halls of both buildings indicate a high level of prestige approaching that of contemporary official architecture, for instance on the

[5] With regard to possible ethnographic parallels for guest houses of the twentieth century A.D. in the vernacular architecture of the Syrian Jazira, see Tunca 1990: 267–68, fig. 1, pl. 1; Pütt 2005: 159ff., 205ff.

oi.uchicago.edu

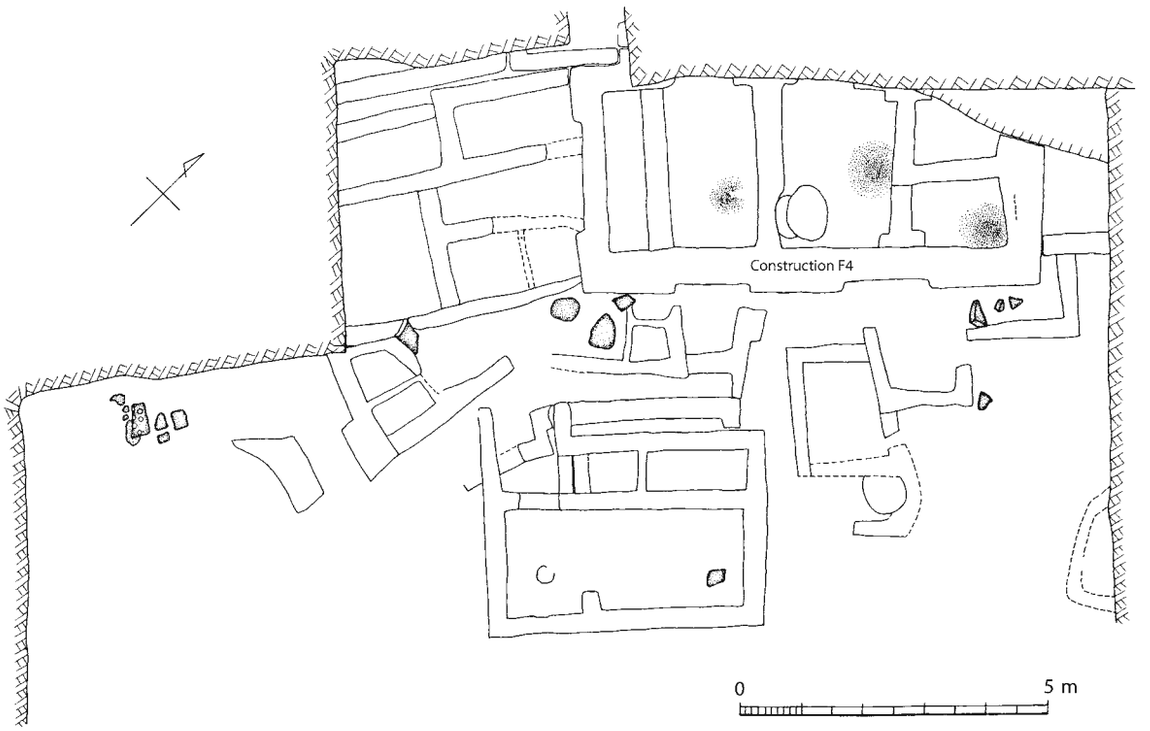


Figure 14.22. Telul eth-Thalathat, construction F4 and adjacent buildings
(after Fukai, Horiuchi, and Matsutani 1970: pl. 66)

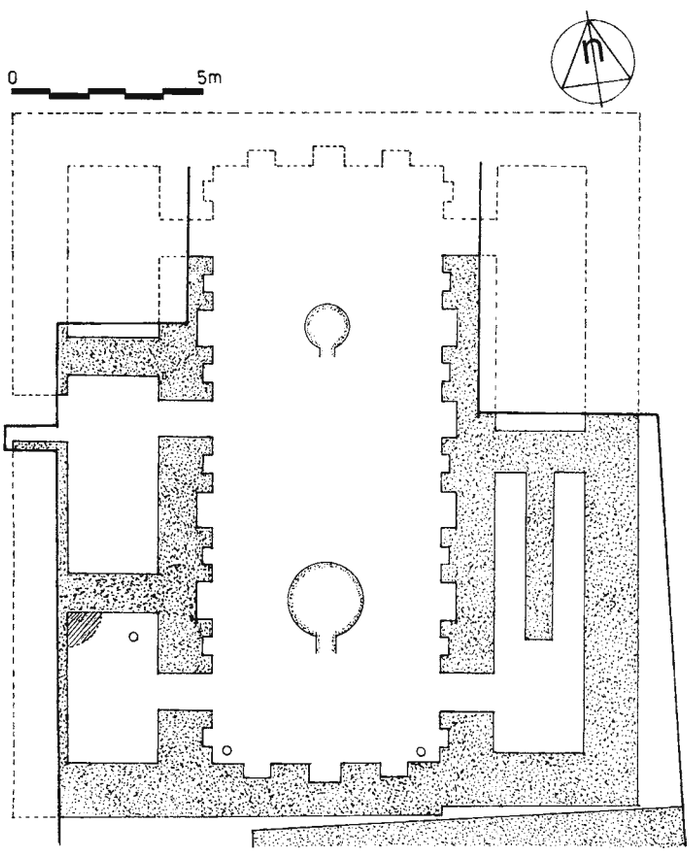


Figure 14.23. Tall Qannas, Temple Nord
(after Finet 1975: fig. 4)

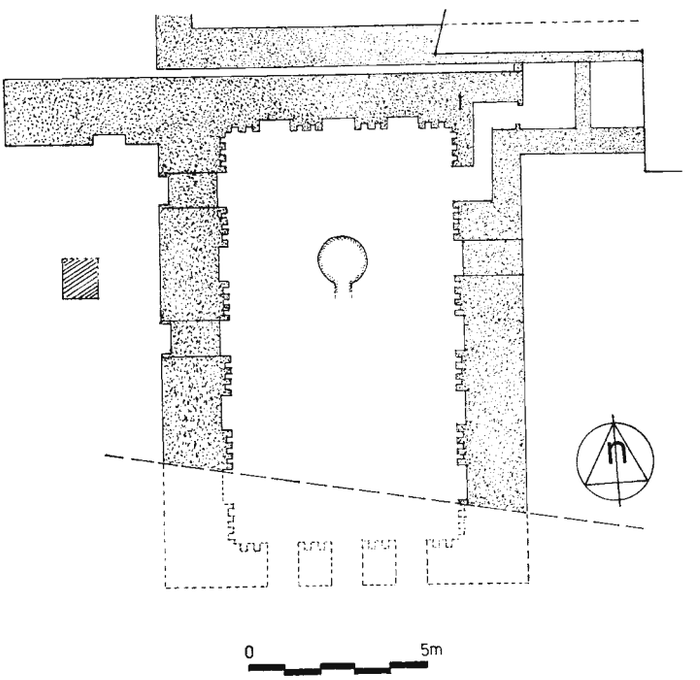


Figure 14.24. Tall Qannas, Temple Sud
(after Finet 1975: fig. 6)

oi.uchicago.edu

Temple Terrace of Jebel Aruda (van Driel and van Driel-Murray 1979: map 3). It is inescapable, however, that the buildings, although prominently located on top of a natural mound, seem to have lacked equivalent niche ornaments on their outer facades.

It therefore appears that during the Late Uruk period, the distributive pattern of buttress-recess arrangements was regarded as an appropriate template for buildings of the semi-official sphere. If we accept the common interpretation of the Acropole Cultuelle as an administrative center for Habuba Kabira made up of reception rooms for the notables, assembly halls, and accompanying storage units, then this would indicate an architectural symbolism linking the Temple Nord and the Temple Sud to a semi-official sphere in the tradition of the early bâtiments de prestige of the Ubaid period (Finet 1975: 157ff., figs 4–8, 1977: 111ff., 1979: 79, 86ff., figs. 14, 16, 18, 20, 2000: 83ff.; Strommenger 1980: 41ff., fig. 21 and back cover; Heinrich 1982: 83ff.; Tunca 1990: 263ff.; Werner 1994: 28ff., 118ff., 146–47, 160–61, pl. 70; Kohlmeyer 1996: 97 n. 7; Vallet 1996: 62ff., fig. 9; Sievertsen 1998: 223, 227ff., 294ff.; Akkermans and Schwartz 2003: 191).

Against this background another representative of the semi-official sphere of Late Uruk buttress-recess architecture possibly can be identified with the compound of period V on the Upper Citadel Mound of Godin Tepe (fig. 14.25; Weiss and Young 1975: 1ff., fig. 2, pls. 1, 2a, 3; Sievertsen 1998: 303; Badler 2002: 79, 83–84, 87–88, fig. 5). It is less easy to evaluate the evidence from the Uruk-related Late Chalcolithic settlement at Arslantepe on the Malatya Plain, featuring building XXIX of period VII and Temples A and B of period VIA. Although the general ar-

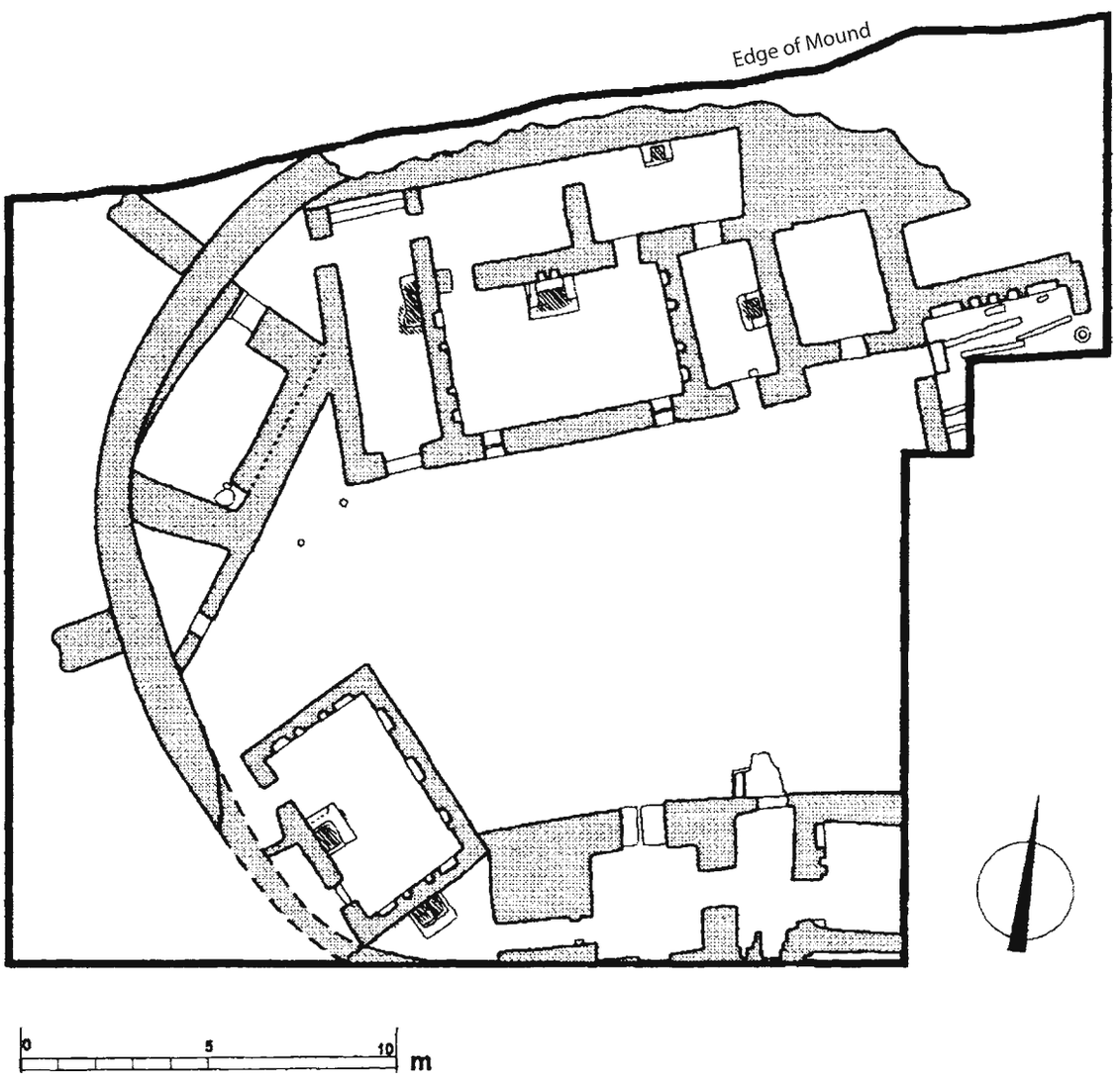


Figure 14.25. Godin Tepe, compound of period V on the Upper Citadel Mound (after Badler 2002: fig. 5, top)

oi.uchicago.edu

chitecture and inventories seem to point to a sphere of elevated prestige, the niche arrangements appear to be rather simple and consist mainly of plain end-wall niches within the halls (Frangipane and Palmieri 1983: 315ff.; Frangipane 1997: 46ff., 70–71, figs. 2–5, 7, 2001: 325ff., figs. 9:3, 5, 2002: 123ff., figs. 3–6, 2003: 147ff., figs. 2, 4–6, pl. 1, 2009: 138–39, figs. 3–6; Sievertsen 1998: 303; Helwing 2003b: 74ff.; Butterlin 2009a: 5).

CONCLUSION

By the end of the Ubaid period, we can roughly distinguish among three different levels of buttress-recess architecture in Mesopotamia. These levels seem to display architectural contexts of restricted, elevated, and high social prestige, and we have assigned them experimentally to a private, a semi-official, and an official sphere of Ubaid architecture, the last two not appearing before the Ubaid 3 period. It should be stressed that, strictly speaking, the buttress-recess arrangements mirror only the prestige of the associated buildings. These architectural arrangements are consequently of limited aid with regard to any detailed functional analysis of the individual buildings (see also Sievertsen 1998: 1, 303–04).

The three architectural levels or spheres evidently developed against the background of important socioeconomic changes during the Ubaid period. Social equality, which we can broadly assume for the Samarra period, slowly gave way to increasing social distinctions, pointing to the incipient formation of stratified societies. Exactly this process is reflected in the architecture of the later phases of the Ubaid period, and in particular in its buttress-recess arrangements and the significant variations in their mode of application.

Step by step, buttress-recess arrangements adopted the character of a regular sign system indicating status and identity on a local, regional, and supra-regional level. It would seem that, from the time they made their debut, semi-official and official buildings gradually appropriated the association with buttresses and recesses from residential buildings. During the Ubaid period, their employment as status symbols was only basically applied, however. The full scope of this symbolic role was only realized during the course of the Uruk period, when buttress-recess arrangements turned into a virtually indispensable means of displaying conspicuous consumption and ideological propaganda.

ACKNOWLEDGMENTS

I thank Susan Pollock for correcting my English, and Bekir Gurdil and Joan Oates for important advice.

BIBLIOGRAPHY

Akkermans, Peter M. M. G.

1988 “An Updated Chronology for the Northern Ubaid and Late Chalcolithic Periods in Syria: New Evidence from Tell Hammam et-Turkman.” *Iraq* 50: 109–46.

Akkermans, Peter M. M. G., and Glenn M. Schwartz

2003 *The Archaeology of Syria: From Complex Hunter-gatherers to Early Urban Societies (ca. 16,000–300 B.C.)*. Cambridge: Cambridge University Press.

Al-A’dami, A.

1968 “Excavations at Tell es-Sawwan (Second Season).” *Sumer* 24: 57–94.

Arzt, J. M.

2001 Excavations at Tell Ziyadeh, Syria: The Northern Ubaid Reconsidered. Ph.D. dissertation, Yale University.

oi.uchicago.edu

Aurenche, Olivier

1981 *La maison orientale: L'architecture du Proche Orient ancien des origines au milieu du quatrième millénaire*. Paris: Geuthner.

1996 "Famille, fortune, pouvoir et architecture domestique dans les villages du Proche Orient." In *Houses and Households in Ancient Mesopotamia* (Papers Read at the 40th Rencontre Assyriologique Internationale Leiden, July 5–8, 1993), edited by K. R. Veenhof, pp. 1–16. Leiden and Istanbul: Nederlands Historisch-Archaeologisch Instituut te Istanbul.

Badler, V. R.

2002 "A Chronology of Uruk Artifacts from Godin Tepe in Central Western Iran and Implications for the Interrelationships between the Local and Foreign Cultures." In *Artefacts of Complexity: Tracking the Uruk in the Near East*, edited by J. N. Postgate, pp. 79–109. Iraq Archaeological Reports 5. Warminster: British School of Archaeology in Iraq.

Behm-Blancke, M. R.

1984 "Hassek Höyük: Vorläufiger Bericht über die Ausgrabungen in den Jahren 1981–1983." *Istanbuler Mitteilungen* 34: 31–149.

Behm-Blancke, M. R., editor

1992 *Hassek Höyük: Naturwissenschaftliche Untersuchungen und lithische Industrie*. Istanbuler Forschungen 38. Tübingen: Ernst Wasmuth.

Bernbeck, Reinhard

1994 *Die Auflösung der häuslichen Produktionsweise: Das Beispiel Mesopotamiens*. Berliner Beiträge zum Vorderen Orient 14. Berlin: Dietrich Reimer.

1995a "Die 'Obed-Zeit: Religiöse Gerontokratien oder Häuptlingstümer?" In *Zwischen Euphrat und Indus: Aktuelle Forschungsprobleme in der Vorderasiatischen Archäologie*, edited by K. Bartl, R. Bernbeck, and M. Heinz, pp. 44–56. Hildesheim, Zürich, and New York: Georg Olms.

1995b "Dörfliche Kulturen des keramischen Neolithikums in Nord- und Mittelmesopotamien: Vielfalt der Kooperationsformen." In *Zwischen Euphrat und Indus: Aktuelle Forschungsprobleme in der Vorderasiatischen Archäologie*, edited by K. Bartl, R. Bernbeck, and M. Heinz, pp. 28–43. Hildesheim, Zürich, and New York: Georg Olms.

Breniquet, Catherine

1991 "Tell es-Sawwan: Réalités et problèmes." *Iraq* 53: 75–90.

1992 "Rapport sur deux campagnes de fouilles à Tell es-Sawwan, 1988–1989." *Mesopotamia* 27: 5–30.

1996 *La disparition de la culture de Halaf: Les origines de la culture d'Obeid dans le nord de la Mésopotamie*. Paris: Éditions recherche sur les civilisations.

2000 "De Bouqras à Tell es-Sawwan: Les premiers avatars des plans tripartites du nord mésopotamien." In *La Djéziré et l'Euphrate syriens: De la protohistoire à la fin du II^e millénaire av. J.-C.: Tendances dans l'interprétation historique des données nouvelles*, edited by O. Rouault and M. Wäfler, pp. 55–69. Subartu 7. Turnhout: Brepols.

Broadbent, Geoffrey; Richard Bunt; and Charles Jencks, editors

1980 *Signs, Symbols, and Architecture*. New York: Wiley.

Butterlin, Pascal

2003 *Les temps proto-urbains de Mésopotamie: Contacts et acculturation à l'époque d'Uruk au Moyen-Orient*. Paris: Centre National de la Recherche Scientifique.

2006 "Où sont les fenêtres? Lumière et architecture tripartite proto-urbaine de Haute Mésopotamie." In *Les espaces Syro-Mésopotamiens: Dimensions de l'expérience humaine au Proche-Orient ancien; Volume d'hommage offert à Jean-Claude Margueron*, edited by P. Butterlin, pp. 41–47. Subartu 17. Turnhout: Brepols.

2009a "Introduction: Tepe Gawra et le monde proto-urbain de Mésopotamie." In *A propos de Tepe Gawra, le monde proto-urbain de Mésopotamie*, edited by P. Butterlin, pp. 1–14. Subartu 23. Turnhout: Brepols.

2009b "Dynamiques territoriales de la culture de Gawra." In *A propos de Tepe Gawra, le monde proto-urbain de Mésopotamie*, edited by P. Butterlin, pp. 149–66. Subartu 23. Turnhout: Brepols.

oi.uchicago.edu

Collins, Paul

2000 *The Uruk Phenomenon: The Role of Social Ideology in the Expansion of the Uruk Culture during the Fourth Millennium B.C.* British Archaeological Reports, International Series 900. Oxford: Archaeopress.

Egami, Namio, editor

1958 *Telul eth Thalathat*, Volume 1: *The Excavation of Tell II: The First and Second Season (1956–1957).* Tokyo University Iraq-Iran Archaeological Expedition, Report 1. Tokyo: Institute of Oriental Culture, University of Tokyo.

Eichmann, Ricardo

1989 *Uruk, Die Stratigraphie: Grabungen 1912–1977 in den Bereichen "Eanna" und "Anu-Ziqqurrat".* Ausgrabungen in Uruk-Warka, Endberichte 3. Mainz am Rhein: Philipp von Zabern.

1991 *Aspekte prähistorischer Grundrißgestaltung in Vorderasien.* Baghdader Forschungen 12. Mainz am Rhein: Philipp von Zabern.

Emberling, Geoff; J. Cheng; T. E. Larsen; Holly Pittman; T. B. B. Skuldboel; J. Weber; and Henry T. Wright

1999 "Excavations at Tell Brak 1998: Preliminary Report." *Iraq* 61: 1–41.

Emberling, Geoff, and Helen McDonald

2003 "Excavations at Tell Brak 2001–2002: Preliminary Report." *Iraq* 65: 1–75.

Esin, Ufuk

1983 "Zur Datierung der vorgeschichtlichen Schichten von Değirmentepe bei Malatya in der östlichen Türkei." In *Beiträge zur Altertumskunde Kleinasiens: Festschrift für Kurt Bittel*, edited by R. M. Boehmer and H. Hauptmann, pp. 175–90. Mainz am Rhein: Philipp von Zabern.

1994 "The Functional Evidence of Seals and Sealings of Değirmentepe." In *Archives before Writing* (Proceedings of the International Colloquium Oriolo Romano, October 23–25, 1991), edited by P. Ferioli, E. Fiandra, G. G. Fissore, and M. Frangipane, pp. 59–81. Turin: Pubblicazioni degli archivi di Stato.

es-Soof, B.

1968 "Tell es-Sawwan, Excavation of the Fourth Season (Spring 1967)." *Sumer* 24: 3–15.

1971 "Tell es-Sawwan, Fifth Season's Excavations (Winter 1967–1968)." *Sumer* 27: 3–7.

Finet, A.

1975 "Les temples sumériens du Tell Kannâs." *Syria* 52: 157–74.

1977 "L'apport du Tell Kannâs à l'histoire proche-orientale, de la fin du 4^{e} millénaire à la moitié du 2^{e}." In *Le Moyen Euphrate: Zone de contacts et d'échanges* (Actes du Colloque de Strasbourg 10–12 mars 1977), edited by J.-C. Margueron, pp. 109–15. Leiden: Brill.

1979 "Bilan provisoire des fouilles belges du Tell Kannâs." *Annual of the American Schools of Oriental Research* 44: 79–95.

2000 "*Les avatars du Tell Kannâs*." In *La Djéziré et l'Euphrate syriens: De la protohistoire à la fin du II^{e} millénaire av. J.-C.; Tendances dans l'interprétation historique des données nouvelles*, edited by O. Rouault and M. Wäfler, pp. 81–89. Subartu 7. Turnhout: Brepols.

Forest, Jean-Daniel

1983a "Aux origines de l'architecture obeidienne: Les plans de type Samarra." *Akkadica* 34: 1–47.

1983b "Rapport préliminaire sur la 3ème campagne à Tell el 'Oueili." In *Larsa (8ème et 9ème campagnes, 1978 et 1981) et 'Oueili (2ème et 3ème campagnes, 1978 et 1981): Rapport préliminaire*, edited by J.-L. Huot, pp. 71–80. Paris: Éditions recherches sur les civilisations.

1987a "La grande architecture obeidienne: Sa forme et sa fonction." In *Préhistoire de la Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du djebel Hamrin* (Colloque international du Centre National de la Recherche Scientifique, Paris 17–19 décembre 1984), edited by J.-L. Huot, pp. 385–423. Paris: Éditions du Centre National de la Recherche Scientifique.

1987b "Tell el'Oueili, quatrième campagne (1983), stratigraphie et architecture." In *Larsa (10^{e} campagne, 1983) et 'Oueili (4^{e} campagne, 1983): Rapport préliminaire*, edited by J.-L. Huot et al., pp. 17–32. Paris: Éditions recherches sur les civilisations.

1993 Review of *Aspekte prähistorischer Grundrissgestattung in Vorderasien. Beiträge zum Verständnis bestimmter Grundrissmerkmale in ausgewählten neolithischen und chalkolithischen Siedlungen des 9.–4.*

oi.uchicago.edu

Jahrtausends v. Chr. (mit Beispielen aus der europäischen Prähistorie), by Ricardo Eichman. *Revue Assyriologique* 87: 161–81.

1996 "*Mésopotamie: L'apparition de l'état VII^e^–III^e^ millénaires*." Paris: Méditerranée.

1997 "L'habitat urukien du Djebel Aruda: Approche fonctionnelle et arrière-plans symboliques." In *Les maisons dans la Syrie antique du III^e^ millénaire aux débuts de l'Islam: Pratiques et représentations de l'espace domestique* (Actes du Colloque International, Damas 27–30 juin 1992), edited by C. Castel, M. al-Maqdissi, and F. Villeneuve, pp. 217–34. Bibliothèque archéologique et historique 150. Beirut: Institut français d'archéologie du Proche-Orient.

2001 "De l'anecdote à la structure: L'habitat de la culture de Gawra et la chefferie nord-mésopotamienne." In *Études mésopotamiennes: Recueil de textes offert à Jean-Louis Huot*, edited by C. Breniquet and C. Kepinski, pp. 177–96. Paris: Éditions recherches sur les civilisations.

Frangipane, Marcella

1997 "A 4th-millennium Temple/Palace Complex at Arslantepe-Malatya: North-south Relations and the Formation of Early State Societies in the Northern Regions of Greater Mesopotamia." *Paléorient* 23: 45–73.

2001 "Centralization Processes in Greater Mesopotamia: Uruk 'Expansion' as the Climax of Systemic Interactions among Areas of the Greater Mesopotamian Region." In *Uruk Mesopotamia and Its Neighbors: Cross-cultural Interactions in the Era of State Formation*, edited by M. S. Rothman, pp. 307–47. Santa Fe: School of American Research Press.

2002 "'Non-Uruk' Developments and Uruk-linked Features on the Northern Borders of Greater Mesopotamia." In *Artefacts of Complexity: Tracking the Uruk in the Near East*, edited by J. N. Postgate, pp. 123–48. Iraq Archaeological Reports 5. Warminster: British School of Archaeology in Iraq.

2003 "Developments in Fourth Millennium Public Architecture in the Malatya Plain: From Simple Tripartite to Complex and Bipartite Pattern." In *From Village to Cities: Early Villages in the Near East; Studies Presented to Ufuk Esin*, edited by M. Özdoğan, H. Hauptmann, and N. Başgelen, pp. 147–69. Istanbul: Arkeoloji ve Sanat Yayinlari.

2009 "Non-Urban Hierarchical Patterns of Territorial and Political Organisation in Northern Regions of Greater Mesopotamia: Tepe Gawra and Arslantepe." In *A propos de Tepe Gawra, le monde proto-urbain de Mésopotamie*, edited by P. Butterlin, pp. 135–48. Subartu 23. Turnhout: Brepols.

Frangipane, Marcella, and A. Palmieri, editors

1983 "Perspectives on Protourbanization in Eastern Anatolia: Arslantepe (Malatya); An Interim Report on 1975–1983 Campaigns." *Origini* 12: 287–668.

Fujii, H., editor

1981 "Preliminary Report of Excavations at Gubba and Songor." *Al-Rāfidān* 2: 131–241.

Fukai, Shinji; Kiyoharu Horiuchi; and Toshio Matsutani

1970 *Telul eth Thalathat*, Volume 2: *The Excavation of Tell II; The Third Season (1964)*. Tokyo University Iraq-Iran Archaeological Expedition, Report 11. Tokyo: Yamakawa.

Fukai, Shinji, and Toshio Matsutani

1981 *Telul eth Thalathat*, Volume 4: *The Excavation of Tell II; The Fifth Season (1976)*. Tokyo University Iraq-Iran Archaeological Expedition, Report 17. Tokyo: Institute of Oriental Culture, University of Tokyo.

Gibson, McGuire; Amr al-Azm; Clemens Reichel; Salam al-Quntar; Judith A. Franke; Lamya Khalidi; Carrie Hritz; Mark Altaweel; Coleen Coyle; Carlo Colantoni; Jonathan Tenney; Ghassan A. Aziz; and Tobin Hartnell

2002 "Hamoukar: A Summary of Three Seasons of Excavation." *Akkadica* 123: 11–34.

Gurdil, B.

2005 Architecture and Social Complexity in the Late Ubaid Period: A Study of the Built Environment of Değirmentepe in East Anatolia (Turkey). Ph.D. dissertation, University of California, Los Angeles.

Gut, R.

1995 *Das prähistorische Ninive: Zur relativen Chronologie der frühen Perioden Nordmesopotamiens*. Baghdader Forschungen 19. Mainz am Rhein: Philipp von Zabern.

oi.uchicago.edu

2002 "The Significance of the Uruk Sequence at Nineveh." In *Artefacts of Complexity: Tracking the Uruk in the Near East*, edited by J. N. Postgate, pp. 17–48. Iraq Archaeological Reports 5. Warminster: British School of Archaeology in Iraq.

Heinrich, E.

1982 *Die Tempel und Heiligtümer im alten Mesopotamien*. Denkmäler antiker Architektur 14. Berlin: de Gruyter.

1984 *Die Paläste im alten Mesopotamien*. Denkmäler antiker Architektur 15. Berlin: de Gruyter.

Helwing, Barbara

2003a "Feste in Değirmentepe? Die soziale Dynamik des Feierns in frühen komplexen Gesellschaften." In *From Village to Cities: Early Villages in the Near East; Studies Presented to Ufuk Esin,* edited by M. Özdoğan, H. Hauptmann and N. Başgelen, pp. 57–72. Istanbul: Arkeoloji ve Sanat Yayinlari.

2003b "Feasts as a Social Dynamic in Prehistoric Western Asia: Three Case Studies from Syria and Anatolia." *Paléorient* 29: 63–85.

Hole, Frank

1983 "Symbols of Religion and Social Organization at Susa." In *The Hilly Flanks: Essays on the Prehistory of Southwestern Asia Presented to Robert J. Braidwood*, edited by T. C. Young, P. E. L. Smith, and P. Mortensen, pp. 315–33. Studies in Ancient Oriental Civilization 36. Chicago: The Oriental Institute.

1987 "Settlement and Society in the Village Period." In *The Archaeology of Western Iran: Settlement and Society from Prehistory to the Islamic Conquest*, edited by F. Hole, pp. 79–105. Smithsonian Series in Archaeological Inquiry. Washington, D.C.: Smithsonian Institution Press.

1990 "Cemetery or Mass Grave? Reflections on Susa I." In *Contribution à l'histoire de l'Iran: Mélanges offerts à Jean Perrot*, edited by F. Vallat, pp. 1–14. Paris: Éditions recherches sur les civilisations.

2000 "The Prehistory of the Khabur." In *La Djéziré et l'Euphrate Syriens de la protohistoire à la fin du II^e^ millénaire av. J.-C.: Tendances dans l'interprétation historique des données nouvelles*, edited by O. Rouault and M. Wäfler, pp. 17–27. Subartu 7. Turnhout: Brepols.

Huot, Jean-Louis

1994 *Les premiers villageois de Mésopotamie: Du village à la ville*. Paris: A. Colin.

Huot, Jean-Louis; Yves Calvet; J. Chevalier; and Jean-Daniel Forest

1981 "Rapport préliminaire sur la huitième campagne à Larsa et la deuxième campagne à Tell el'Oueili (1978). II. Tell el'Oueili. 1. Rapport préliminaire sur la deuxième campagne (1978)." *Syria* 58: 103–20.

Jasim, Sabah A.

1983a "Excavations at Tell Abada. A Preliminary Report." *Iraq* 45: 165–85.

1983b "Notes on the Excavation at Tell Rashid, Iraq." *Paléorient* 9: 99–103.

1985 *The 'Ubaid Period in Iraq: Recent Excavations in the Hamrin Region*. British Archaeological Reports, International Series 267. Oxford: British Archaeological Reports.

1989 "Structure and Function in an 'Ubaid Village." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 79–90. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Killick, R., and Michael Roaf

1979 "Excavations at Tell Madhhur." *Sumer* 35: 542–48.

Kohlmeyer, K.

1996 "Houses in Habuba Kabira-South: Spatial Organisation and Planning of Late Uruk Residential Architecture." In *Houses and Households in Ancient Mesopotamia* (Papers Read at the 40th Rencontre Assyriologique Internationale, Leiden, July 5–8, 1993), edited by K. R. Veenhof, pp. 89–103. Leiden and Istanbul: Nederlands Historisch-Archaeologisch Instituut te Istanbul.

Lenzen, H.

1974 "Die Architektur in Eanna in der Uruk IV Periode." *Iraq* 36: 111–28.

Lloyd, Seton

1940 "Iraq Government Soundings at Sinjar." *Iraq* 7: 13–21.

oi.uchicago.edu

1974 "Abu Shahrein: A Memorandum." *Iraq* 36: 129–38.

Lloyd, Seton, and Fuad Safar

1947 "Eridu: A Preliminary Communication on the First Season's Excavations, January–March 1947." *Sumer* 3: 84–111.

1948 "Eridu: A Preliminary Communication on the Second Season's Excavations, 1947–48." *Sumer* 4: 115–27.

Ludwig, W.

1980 "Maß, Sitte und Technik des Bauens in Habuba Kabira-Süd." In *Le Moyen Euphrate: Zone de contacts et d'échanges* (Actes du Colloque de Strasbourg 10–12 mars 1977), edited by J.-C. Margueron, pp. 63–74. Leiden: Brill.

Margueron, Jean-Claude

1987 "Quelques remarques concernant l'architecture monumentale à l'époque d'Obeid." In *Préhistoire de la Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du djebel Hamrin* (Colloque international du Centre National de la Recherche Scientifique, Paris 17–19 décembre 1984), edited by J.-L. Huot, pp. 349–77. Paris: Éditions du Centre National de la Recherche Scientifique.

1989 "Architecture et société à l'époque d'Obeid." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 43–77. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

2006 "Notes d'archéologie et d'architecture orientales 13 – Le Bâtiment Nord de Tepe Gawra XIII." *Syria* 83: 195–228.

2009 "Le temple et le sacré à la fin du cinquième et au début du quatrième millénaire à Tepe Gawra." In *A propos de Tepe Gawra, le monde proto-urbain de Mésopotamie*, edited by P. Butterlin, pp. 41–80. Subartu 23. Turnhout: Brepols.

McGuire, R. H., and Schiffer, M. B.

1983 "A Theory of Architectural Design." *Journal of Anthropological Archaeology* 2: 277–303.

Nissen, Hans J.

2001 "Cultural and Political Networks in the Ancient Near East during the Fourth and Third Millennia B.C." In *Uruk Mesopotamia and Its Neighbors: Cross-cultural Interactions in the Era of State Formation*, edited by M. S. Rothman, pp. 149–79. Santa Fe: School of American Research Press.

Oates, David, and Joan Oates

1993 "Excavations at Tell Brak 1992–93." *Iraq* 55: 155–99.

2006 "Tripartite Buildings and Early Urban Tell Brak." In *Les espaces Syro-Mésopotamiens: Dimensions de l'expérience humaine au Proche-Orient ancien; Volume d'hommage offert à Jean-Claude Margueron*, edited by P. Butterlin, pp. 33–40. Subartu 17. Turnhout: Brepols.

Oates, Joan

1969 "Chogha Mami, 1967–68: A Preliminary Report." *Iraq* 31: 115–52.

1987 "'Ubaid Chronology." In *Chronologies du Proche Orient/Chronologies in the Near East: Relative Chronologies and Absolute Chronology, 16,000–4,000 B.P.* (C.N.R.S. International Symposium, Lyon (France) 24–28 November 1986), edited by O. Aurenche, J. Evin, and F. Hours, pp. 473–82. British Archaeological Reports, International Series 379(ii). Oxford: British Archaeological Reports.

2002 "Tell Brak: The 4th Millennium Sequence and Its Implications." In *Artefacts of Complexity: Tracking the Uruk in the Near East*, edited by J. N. Postgate, pp. 111–22. Iraq Archaeological Reports 5. Warminster: British School of Archaeology in Iraq.

Oates, Joan, and David Oates

1997 "An Open Gate: Cities of the Fourth Millennium B.C. (Tell Brak 1997)." *Cambridge Archaeological Journal* 7: 287–97.

Pollock, Susan

1999 *Ancient Mesopotamia: The Eden that Never Was*. Cambridge: Cambridge University Press.

oi.uchicago.edu

Porada, Edith; Donald P. Hansen; Sally Dunham; and Sidney H. Babcock

1992 "The Chronology of Mesopotamia, ca. 7000–1600 B.C." In *Chronologies in Old World Archaeology*, edited by R. W. Ehrich, vol. 1, pp. 77–121; and vol. 2, pp. 90–124, fig. 3. Chicago and London: University of Chicago Press.

Pütt, K.

2005 *Zelte, Kuppeln und Hallenhäuser: Wohnen und Bauen im ländlichen Syrien*. Petersberg: Michael Imhof.

Redman, C. L.

1978 *The Rise of Civilization: From Early Farmers to Urban Society in the Ancient Near East*. San Francisco: W. H. Freeman.

Reichel, Clemens

2002 "Administrative Complexity in Syria during the 4th Millennium B.C.: The Seals and Sealings from Tell Hamoukar." *Akkadica* 123: 35–56.

Roaf, Michael

1982 "The Hamrin Sites." In *Fifty Years of Mesopotamian Discovery: The Work of the British School of Archaeology in Iraq 1932–1982*, edited by J. Curtis, pp. 40–47. London: British School of Archaeology in Iraq.

1987 "The 'Ubaid Architecture of Tell Madhhur." In *Préhistoire de la Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du djebel Hamrin* (Colloque international du Centre National de la Recherche Scientifique, Paris 17–19 décembre 1984), edited by J.-L. Huot, pp. 425–29. Paris: Éditions du Centre National de la Recherche Scientifique.

1989 "Social Organization and Social Activities at Tell Madhhur." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 91–146. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Roaf, Michael, editor

1984 "Tell Madhhur: A Summary Report on the Excavations." *Sumer* 43: 108–67.

Rothman, Mitchell S.

2001 "The Tigris Piedmont, Eastern Jazira, and Highland Western Iran in the Fourth Millennium B.C." In *Uruk Mesopotamia and Its Neighbors: Cross-cultural Interactions in the Era of State Formation*, edited by M. S. Rothman, pp. 349–401. Santa Fe: School of American Research Press.

2002 *Tepe Gawra: The Evolution of a Small, Prehistoric Center in Northern Iraq*. University Museum Monographs 112. Philadelphia: University of Pennsylvania, Museum of Archaeology and Anthropology.

2009 "Religion, Function, and Social Networks: Tepe Gawra in the Late Fifth and Early Fourth Millennia B.C." In *A propos de Tepe Gawra, le monde proto-urbain de Mésopotamie*, edited by P. Butterlin, pp. 15–39. Subartu 23. Turnhout: Brepols.

Safar, Fuad; Mohamed A. Mustafa; and Seton Lloyd

1981 *Eridu*. Baghdad: Ministry of Culture and Information.

Sauvage, M.

2001 "Les briques de grande taille à empreintes de doigts: Le Chogha Mami Transitional et la culture de Oueili." In *Études mésopotamiennes: Recueil de textes offert à Jean-Louis Huot*, edited by C. Breniquet and C. Kepinski, pp. 417–47. Paris: Éditions recherches sur les civilisations.

Schmidt, J.

1974 "Zwei Tempel der Obed-Zeit in Uruk." *Baghdader Mitteilungen* 7: 173–87.

Sievertsen, Uwe

1998 *Untersuchungen zur Pfeiler-Nischen-Architektur in Mesopotamien und Syrien von ihren Anfängen im 6. Jt. v. Chr. bis zum Ende der frühdynastischen Zeit: Form, Funktion und Kontext*. British Archaeological Reports, International Series 743. Oxford: J. and E. Hedges.

1999 "Early Buttress-recess Architecture in Mesopotamia and Syria." *Baghdader Mitteilungen* 30: 7–20.

2005 "Frühe Pfeiler-Nischen-Architektur aus Tepe Gawra und Telul eth-Thalathat." *Iraq* 67: 399–409.

oi.uchicago.edu

Speiser, E. A.
1935 *Excavations at Tepe Gawra*, Volume 1: *Levels I–VIII*. Publications of the Baghdad School, Excavations 1. Philadelphia: University of Pennsylvania Press.

Stein, Gil J.
1994 "Economy, Ritual and Power in 'Ubaid Mesopotamia." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 35–46. Monographs in World Archaeology 18. Madison: Prehistory Press.

Strommenger, Eva
1979 "Ausgrabungen der Deutschen Orient-Gesellschaft in Habuba Kabira." *Annual of the American Schools of Oriental Research* 44: 63–78.
1980 *Habuba Kabira: Eine Stadt vor 5000 Jahren*. Mainz am Rhein: Philipp von Zabern.

Tobler, Arthur J.
1950 *Excavations at Tepe Gawra*, Volume 2: *Levels IX–XX*. Publications of the Baghdad School, Excavations 1. Philadelphia: University of Pennsylvania Press.

Tunca, Ö.
1990 "'Temple' ou 'bâtiment de prestige'? À propos des temples des périodes d'el-Obed et d'Uruk, et des données ethnoarchéologiques." In *De la Babylonie à la Syrie, en passant par Mari: Mélanges offerts à Monsieur J.-R. Kupper à l'occasion de son 70^e^ anniversaire*, edited by Ö. Tunca, pp. 263–69. Liege: Université de Liège.

Vallet, R.
1996 "Habuba Kebira (Syrie) ou la naissance de l'urbanisme." *Paléorient* 22: 45–76.
1997 "Habuba Kébira sud, approche morphologique de l'habitat." In *Les maisons dans la Syrie antique du III^e^ millénaire aux débuts de l'Islam: Pratiques et représentations de l'espace domestique (*Actes du Colloque International, Damas 27–30 juin 1992), edited by C. Castel, M. al-Maqdissi, and F. Villeneuve, pp. 105–19. Beirut: Institut français d'archéologie du Proche-Orient.

van Driel, G., and C. van Driel-Murray
1979 "Jebel Aruda 1977–1978." *Akkadica* 12: 2–28.

van Loon, Maurits N., editor
1988 *Hammam et-Turkman*, Volume 1: *Report on the University of Amsterdam's 1981–84 Excavations in Syria*. 2 volumes. Leiden: Nederlands Historisch-Archeologisch Instituut te Istanbul.

Weiss, Harvey, and T. Cuyler Young, Jr.
1975 "The Merchants of Susa: Godin V and Plateau-Lowland Relations in the Late Fourth Millennium B.C." *Iran* 13: 1–17.

Werner, Peter
1994 *Die Entwicklung der Sakralarchitektur in Nordsyrien und Südostkleinasien vom Neolithikum bis in das 1. Jt. v. Chr.* Münchener Vorderasiatische Studien 15. Munich: Profil.

Yasin, W.
1970 "Excavation at Tell es-Sawwan, 1969: Report on the Sixth Season's Excavations." *Sumer* 26: 3–20.

Youkana, D. G.
1997 *Tell es-Sawwan: The Architecture of the Sixth Millennium B.C.* Edubba 5. London: NABU Publications.

oi.uchicago.edu

15

A MONUMENTAL FAILURE: THE COLLAPSE OF SUSA

FRANK HOLE, *Yale University*

INTRODUCTION

Since the definition of an Ubaid ceramic sequence by Joan Oates some fifty years ago (Oates 1960), there has been little excavation of the Mesopotamian "heartland," but earlier and later work on the peripheries where Ubaid-like ceramics have been found has lead some scholars to believe in an "Ubaid phenomenon." Close inspection of these archaeological records shows, however, that there is much regional variability underlying a thin veneer of black-on-buff ceramics. In short, different geographic regions experienced different adaptations and trajectories of change despite sharing some ceramic similarities.

The Ubaid — as defined by ceramics — extended from the late sixth to late fifth millennium cal. B.C., undergoing changes and developments that culminated in some instances in monumental structures and evidence of social complexity. In other regions Ubaid ceramics make only a brief appearance, sometimes in quite attenuated "Ubaid-like" styles and forms. There are fundamental differences in the outcomes of long, internal developments, such as those that occurred in southern Mesopotamia or Susiana, and those where Ubaid-like ceramics were introduced into, or adopted by, a foreign, ongoing culture, or were displaced. If we are to make sense of the millennium or more during which Ubaid ceramics flourished, we must examine regional cases independently, keeping in mind the broader context in which these cases developed.

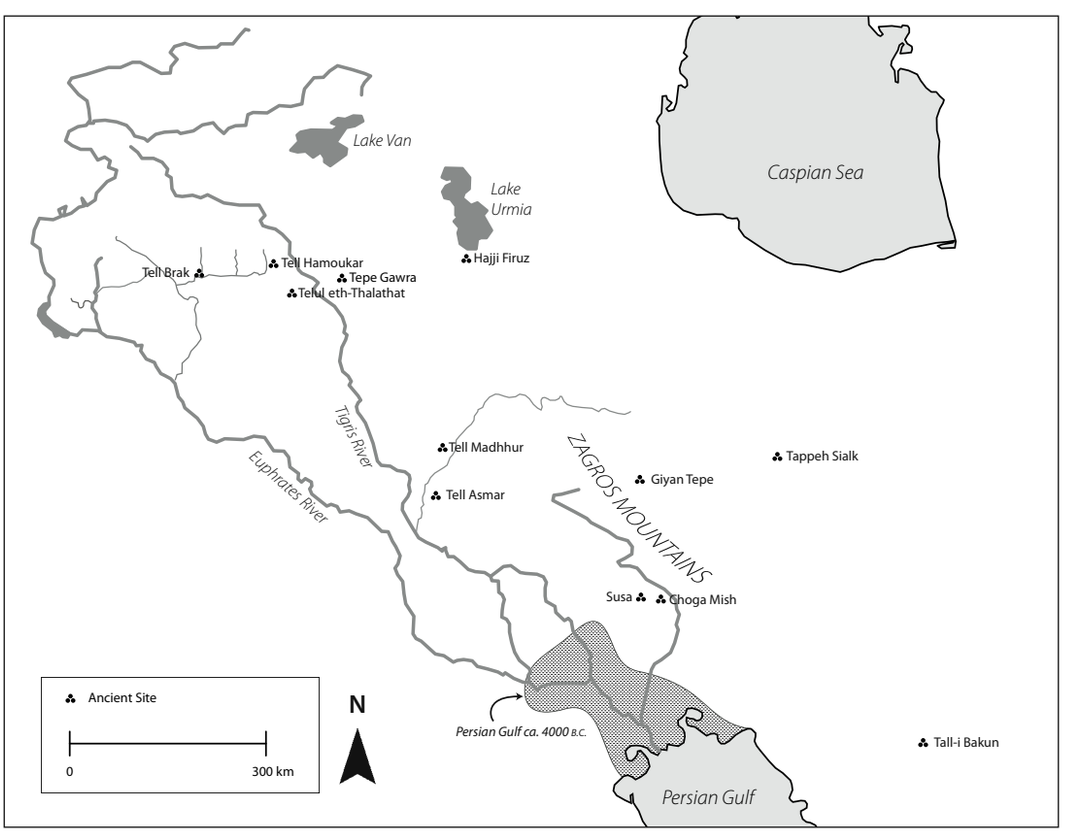


Figure 15.1. Principal sites of Iran and Mesopotamia discussed in the text

oi.uchicago.edu

The neighboring region to the east of Mesopotamia, the Susiana Plain, provides a parallel sequence to that of southern Mesopotamia, and by virtue of large-scale excavation of the site of Susa nearly 100 years ago, coupled with more recent work at earlier sites, we know more about the development and culmination of this culture than we do about contemporary processes elsewhere in the Middle East. This is the case that I discuss below. During the sixth–fifth millennia, Susiana was separated from Mesopotamia by a rapidly rising and advancing Gulf, so that connection between the two regions, while possible by boat, seemingly resulted only in the ceramics following similar stylistic trajectories (fig. 15.1). In all respects, Susiana was large and rich enough to sustain a vigorous indigenous culture in parallel with, and separate from, that of Mesopotamia. Like Oates' delineation of an Ubaid sequence, Le Breton defined a Susiana sequence, which scholars working in Iran have since modified in various ways, in preference to using the Ubaid as a point of reference (Le Breton 1947, 1957).[1] Where other lengthy sequences in contrasting geographic settings have been described, such as Gawra (Tobler 1950) and Hamman et-Turkman (Akkermans 1988), it also makes sense to use the local terms and to treat them as distinct entities deserving of separate treatment.[2] In this paper I emphasize the distinctiveness of the latest period on the Susiana Plain, Susa A (also known as Susa I), the local culmination of the "Ubaid-like" ceramic tradition.

My approach emphasizes ideological and sociological matters in an attempt to give meaning to the archaeological finds. This is possible because of the quality of depictions on seals, sealings, and ceramics from the site of Susa. The wealth of information is unparalleled in its extent and specificity, although depictions on seals from other sites provide temporal background and bolster the reconstructions and arguments. In particular, I focus on the rise and fall of Susa as a residential and ritual site at the end of the Ubaid-related Susiana culture.

In the title of this paper,I use the word "monumental" in two senses. First, I discuss a monumental-scale construction (fig. 15.2). Second, I tell how this monument, the huge platform at Susa, by failing to meet its objective, became a monumental failure. The failure is the termination of the society that built the monument and created its expressive graphics. Both occurred toward the end of the fifth millennium B.C. at a time when the Ubaid style of painting pottery ended and many sites in Iran and southern Mesopotamia that had been central to their regions were abandoned, sometimes with evidence of destruction. In all cases, new ceramics, new glyptic, new settlements, and new organization followed after lapses of variable length. I argue that an agrarian society that relied on ritual specialists to control the forces of nature failed and ultimately gave way to a society based on secular control of human labor in the service of both man and gods.

My topic concerns the role played by ritual, for I see the emergence of ever-more elaborate ritual in the fifth millennium cal. B.C. as central to the construction of temples, as well as to their ultimate destruction or abandonment. I do not maintain that either rituals or temples were confined to the fifth millennium, or that traditions that were established then did not carry forward into successive eras. Rather I maintain that the traits that came to epitomize Mesopotamian religious expression began in the fifth millennium. While evolving sophistication concerning conceptions of the supernatural was almost certainly a factor, I argue that there were external conditions that favored elaboration of ritual and its associated ideology. In particular, I argue that uncertainty about agricultural abundance and regeneration, as well as their periodic failure, contributed to social disruption and was exacerbated during a period of climatic and environmental changes (Hole 1994; Kouchoukos 1998). Rather than review the evidence for this in detail, I shall quickly summarize essential points. First, the fifth millennium saw the transition from generally warmer and wetter conditions to cooler and drier as the monsoon rain that had penetrated Mesopotamia during the Holocene Climatic Optimum shifted southward. During this time sea level was rapidly rising, and by 4000 B.C. the Gulf extended as much as 200 km farther inland than today (fig. 15.1) (Gasche and Tanret 1999; Sanlaville 1997). The major rivers were aggrading, depositing fertile silt on the floodplains, and providing easy gravity-fed irrigation, albeit with the ever-present danger of floods. However, changes in length of growing season and seasonal duration of rainfall impacted agriculture and made subsistence farming problematic over southern Mesopotamia and adjacent Iran. I argue that people regarded these factors, external to the agrarian societies, to have been caused by supernatural forces/gods who needed to be supplicated and placated. Intensification of ritual was designed to meet this need.

[1] As noted in Kouchoukos and Hole 2003, the sequence on the Susiana Plain has been given several designations; in this paper I use the original terms for the terminal part of the sequence.

[2] Tepe Gawra XI-A to IX has been called Middle to Late Gawra period (Porada et al. 1992), the Northern Early Uruk period (Oates and Oates 1997), and the Terminal Ubaid (Ur 2002: 17–18). Comparative chronological charts for greater Mesopotamia are in Rothman 2002: tables 1–2.

oi.uchicago.edu

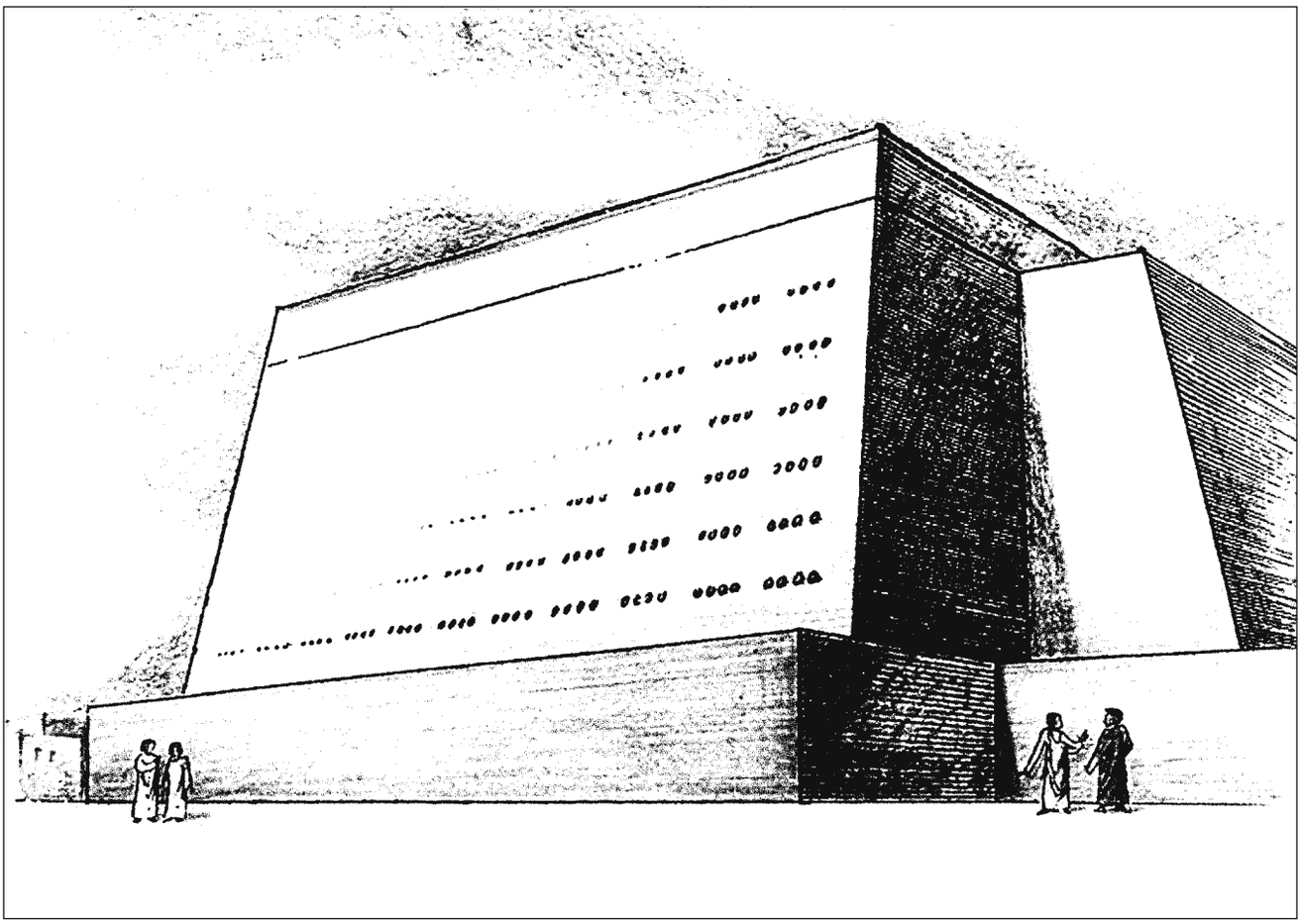


Figure 15.2. Reconstruction of the Susa platform (Musée du Louvre 2001: fig. 2)

Having conceived of these forces as having human qualities, people treated them much as they honored their terrestrial leaders, with ritual and gifts.

In the remainder of this short paper I first describe the situation at Susa and in surrounding Susiana during the second half of the fifth millennium B.C. Second, I review evidence from seals and sealings for the character and intensification of ritual, drawing on a wider region. Finally, and very briefly, I relate changes at Susa to the final Ubaid elsewhere.

WHAT HAPPENED AT SUSA?

The site of Susa is on the terrace that forms the edge of a former floodplain of the Karkheh River (fig. 15.3). To the north of Susa, along the same terrace, there were some small settlements such as Jaffarabad, Jowi, Bendebal, and Bouhallan that were occupied at various times from the late sixth through late fifth millennia (Dollfus 1978). These sites formed the western fringe of settlement on the Khuzistan Plain, a broad expanse of arable land at the base of the Zagros Mountains of southwestern Iran. Survey of this plain has revealed hundreds of sites dating from the sixth through fifth millennia (Adams 1962; Kouchoukos and Hole 2003). It is interesting, however, that the greatest number of sites occurred in the central part of the plain, surrounding the site of Choga Mish. Only toward the end of the fifth millennium did settlement shift toward the west, where Susa became the pre-eminent site. The early settlement is estimated to have covered some 15 ha, about the same as Choga Mish. The reason for the settlement of Susa is obscure, but some speculate that this was a result of centuries of very unstable weather and changes in the hydrology,

oi.uchicago.edu

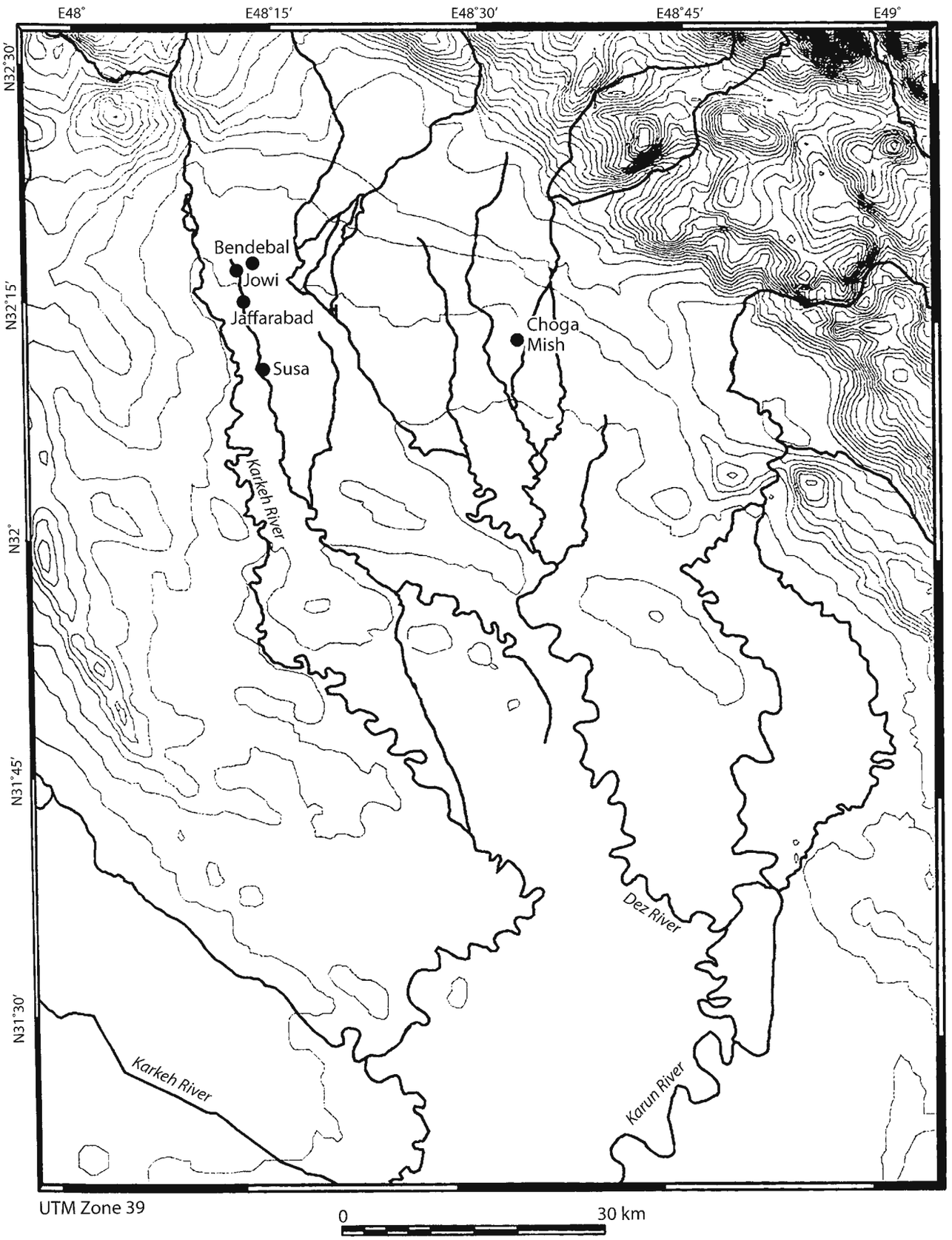


Figure 15.3. Location of sites in Susiana (Kouchoukos 1998: fig. 3.8)

oi.uchicago.edu

perhaps exacerbated by social unrest (Hole 1994), and a westward shift of the rivers that may have affected agriculture at some sites has recently been discerned (Alizadeh et al. 2004; Kouchoukos 1998: 114–17).

The important fact is that Choga Mish, the largest site (15 ha) on the Susiana Plain in the mid-fifth millennium, featured a non-residential building at least 10 × 15 m in size, perhaps on a terrace, with plastered walls up to 1.5 m wide (Kantor 1976: 27–28, fig. 11). Not long after the building was constructed, it was destroyed by fire, and the site itself was largely abandoned. Not until Susa was founded some hundreds of years later was there a site of equivalent size in Susiana. Unfortunately the burned building was not excavated before dual tragedies — the death of the principal excavator, Pinhas Delougaz, and destruction of the dig house and artifacts during the Iranian Revolution — caused irreparable loss of information (Alizadeh 1996, 2003).

Let us follow the succession of events at Susa. Before proceeding, however, it is useful to discuss what we know of these events. Susa was excavated early in the twentieth century by the French Mission under the direction of Jacques de Morgan, a mining engineer with previous experience in Egypt (de Morgan 1912). He brought to the site techniques and a scale of work (up to 1,200 men) that are unimaginable today, but that had proven successful in excavations elsewhere. After preliminary testing, to gain a picture of the entire sequence of occupation, he directed a trench 90 m long × 30 m wide to be excavated down to sterile soil. J. E. Gautier, aided by Roland de Mecquenem, had the men dig cuts 5 m wide × 5 m deep, for the length and breadth of this trench, until they reached sterile soil (see plan in Canal 1978b: fig. 2). Since the finds were the objective, the men who recovered objects gave little, if any, consideration to context except as it was revealed in the 5 m cuts. Moreover, as techniques of exposing mudbrick were poorly developed, the men cut through many constructions. One of these that was too massive to ignore was the Susa A platform, which Mecquenem recognized as an 11–12 m high massif of unbaked bricks pierced by drains (Mecquenem 1928: 100). He largely avoided the platform by stepping-in the side of the trench.

At the base of the trench, in the last 5 m layer, were two significant features. One was a brick structure, some 14 × 7 m in extent and 1.7 m high. The second feature was a cemetery adjacent to this low platform. De Morgan, who was in charge but not present when the cemetery was excavated, claimed that it encompassed 750 sq. m, whereas Mecquenem, who was present, says it covered only 120 sq. m. Although the two investigators' descriptions differ somewhat (Mecquenem 1928: 100, 1943: 5; de Morgan 1912: 7), they make it clear that the cemetery was very compressed in size and contained as many as 2,000 interments with pots and other artifacts. Mecquenem (1928: 100) says that the burials were secondary, de Morgan (1909: 5, 1912: 7), that they were primary. Apart from these cursory verbal descriptions, there is one drawing of a burial with associated artifacts (fig. 15.4) (de Morgan 1912: fig. 113). In the previous Ubaid conference, I reviewed fifth-millennium burial practices, and in a subsequent paper, I inferred that the Susa cemetery must have been a simultaneous deposit, unusual for its time, when extended, primary burials were the norm (Hole 1989, 1990); otherwise, it would have been impossible to pack so many bodies into such a small area, along with some 4,000 associated ceramic vessels.

In the 1970s, under the direction of Jean Perrot, salvage excavation of the low platform and edge of the high platform was undertaken. These revealed a great deal about the sequence of events, as shown in a section drawing by Denis Canal (Canal 1978b: fig. 7; reproduced with de Morgan's coupe théorétique in Hole 1990: figs. 1–2). Unfortunately, the early excavators had removed all traces of the cemetery except for two secondary burials that had cut into the remnant early platform, now called the "massif funéraire" (fig. 15.5). From this slight evidence, we can infer that the cemetery post-dates the low platform.

During the period of use of the low platform, but after sufficient time had elapsed to allow the accumulation of around 1 m of occupation debris, the high, stepped platform was started, with a basal length of some 80 m. Fortunately, the French excavators avoided

Figure 15.4. Drawing of burial in Susa cemetery (de Morgan 1912: fig. 113)

oi.uchicago.edu

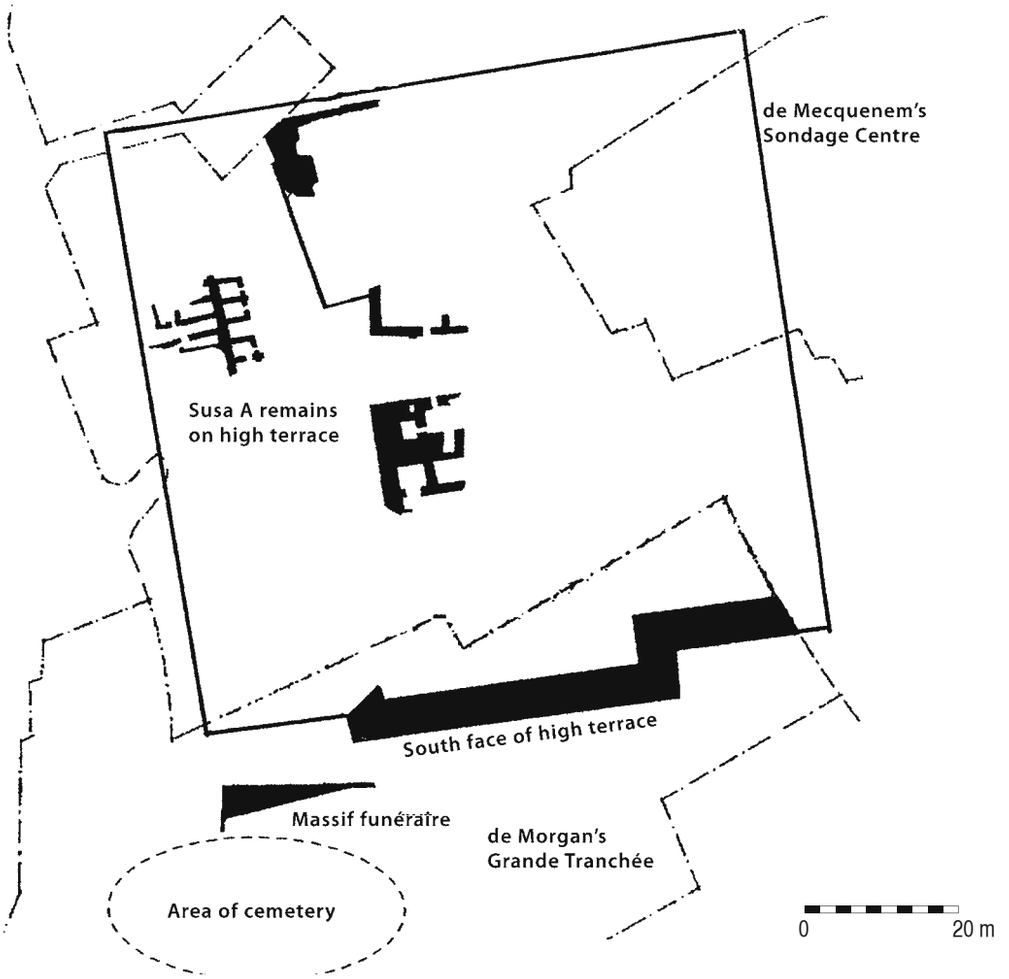


Figure 15.5. Location plan of the cemetery, the low platform, and the approximate outline of the high platform (after Kouchoukos et al. 1998: fig. 3.2, redrawn from Canal 1978a)

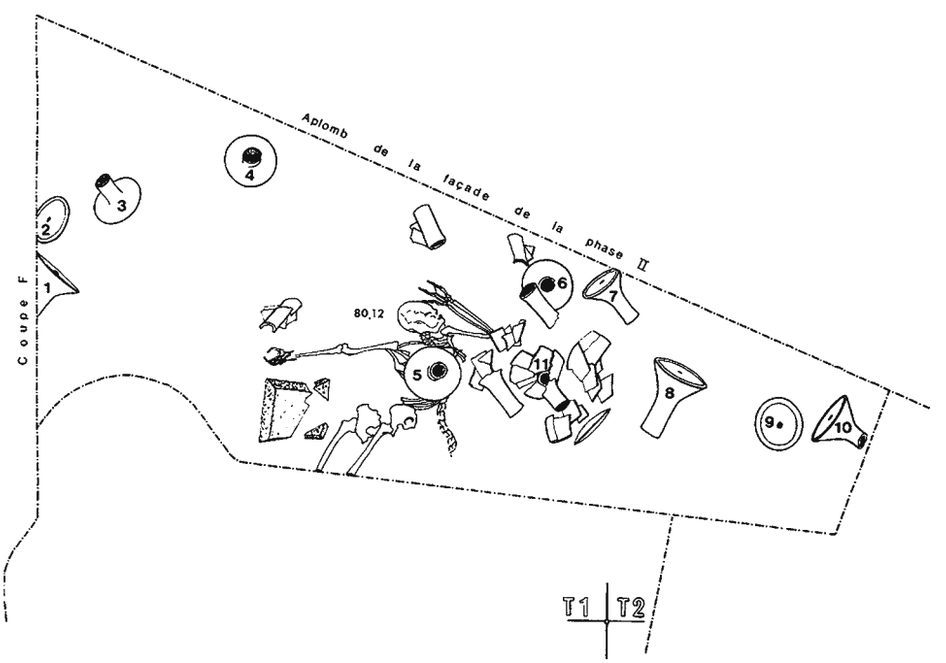


Figure 15.6. Collapse from the destruction of the Susa platform, with body buried beneath the rubble (Canal 1978b: fig. 10)

oi.uchicago.edu

this so it was possible for Canal to determine that there was a plinth some 2 m in height before the wall of the platform stepped in and sloped toward the top (fig. 15.2; Musée du Louvre 2001). A massive conflagration on top led to the collapse of the facade, leaving a body buried beneath the bricks (Perrot 1975: 229) (fig. 15.6). The debris also buried the remnant low platform. A second rebuilding followed, and it, too, collapsed with further evidence of burning. The platform and perhaps the entire site was then abandoned. Since the entire cemetery had been removed, it was not possible for Canal to determine whether it had been covered by either of the burning and collapse events. What is clear, however, is that the ceramics found with the burials are the same as ceramics taken from the settlement and from on top of the platform (Canal 1978b; Stève and Gasche 1971, 1990).

Excavation in the contemporary settlement area (Acropole 1) by Alain Le Brun revealed at its base a ceramic assemblage like that in the cemetery (Le Brun 1971). In subsequent layers there was a decrease in the proportion of painted ceramics, denoting a period known as Terminal Susa A. A break in the occupational sequence occurs between layers 23 and 22, after which new ceramics, brick sizes, and building orientation typical of the Uruk period were introduced. Without excavation of the remaining sides of the platform, it is unknowable whether its final destruction occurred at about the time of this break in the sequence or during the earlier florescence of Susa A ceramic art and the use of the cemetery.

The upper surface of the platform apparently held various buildings, including a granary and a small platform, only traces of which remained for excavators (Stève and Gasche 1971: figs. 2–3) (fig. 15.5). It is significant, however, that the remnant traces showed evidence of burning and large ceramic cones like those that had been placed in rows on the facade of the platform. The use of cones as decoration anticipates their use (albeit in a different style) half a millennium later on Uruk temples (Stève and Gasche 1971: 38).

We turn now to the cemetery. As I note above, it post-dates the low platform and could be associated with one of the destruction episodes. The ceramics found in it are unique and represent the last great artistic expression of the fifth millennium — indeed, unpainted pottery was to dominate the ceramic repertory for the next thousand years. Many of the Susa A vessels represent the finest artistic expressions of the ancient world and have become icons of art history. A few among these provide images of ritual (Hole 1983). At Susa there was an exuberant burst of artistic and iconographic expression that was not paralleled at any other site in the Near East. Indeed, by the time Susa A pottery was being painted, the Ubaid tradition, of which it is a regional variant, had already ceased to exist in northern Mesopotamia and probably in the south as well: Susa may have been one of the final expressions of this tradition.

The cemetery also contained non-ceramic objects, in particular artifacts of copper. There were fifty-five copper axes, eleven copper disks, a copper needle, a burin, and a chisel (de Morgan 1912). While typical Ubaid burials contained pottery, only those at Susa had copper objects, some of which played a role in ritual.

There is one other source of information that bears directly on Susa ritual. This is clay on which stamp seals had impressed figurative designs. Sealings secured goods, whether in jars, baskets, bags, or storerooms, and had been in use since the Late Neolithic period (Akkermans and Verhoeven 1995), although they are rarely found until the mid-fifth millennium, when both sealings and the stone seals that impressed them are found at a number of sites. The custom of sealing was largely confined to Iran and the piedmont fronting the Zagros/Taurus mountain arc. Apart from Susa, large numbers of seals and sealings have been found at Tepe Gawra (Tobler 1950), in northeastern Iraq, and Giyan Tepe (Contenau and Ghirshman 1935) in central western Iran. Isolated examples have also been found at Hajji Firuz in Iran and at Mesopotamian sites such as Tell Asmar and Telul eth-Thalathat. It should be noted that we are probably fortunate to have any seals or sealings from Susa or Giyan, given the nature of the excavations. We were equally fortunate that Tepe Gawra was excavated with care so that we can gain some useful information about the development of iconographic depictions.

The oldest seals and their sealings usually have geometric designs; even in the early fourth millennium when stamp seals were still in use, geometric motifs remain the most numerous. More interesting, however, are the rare seals that depict humans or humanoids. I accept that these are not mere flights of fancy, but do represent something that was current in the culture. Clearly, representations can be stylized and not literal, especially when they are carved into a hard medium; nevertheless, I attach some element of literal meaning to them because all instances have plausible correlates in the real world. Moreover, one can readily find continuity in the styles and content of representations in early historic seals and related texts, despite the passage of a millennium or more.

oi.uchicago.edu

RITUAL PRACTITIONERS TO PRIESTS

The human form, in stylized posture, is the first convincing evidence of humans acting a role that we think of today as *namash*.[3] A namash is a person who is thought to be endowed with the ability to communicate with, and influence the behavior of, supernatural forces. These extraordinary powers may be evidenced by the handling of snakes or bulls. In later Mesopotamian iconography such persons are known as "masters" (of animals) and are associated with gods and kings. The special status of certain individuals may also be shown by poses and depictions of action, as well as association with design elements that may have iconographic significance. In some cases these persons may wear special garb, such as headdresses or sashes. Depictions of humans are rare in prehistory, and, as Yosef Garfinkel has described in elaborate detail, most of these are multiple individuals engaged in a form of line dancing (Garfinkel 2003). The solitary figures seen on the seals, in contrast, are not dancing, at least in the social sense, although the poses adopted in the depictions suggest stylized movements such as one might see in a ritual performance.

The large number of seals from Tepe Gawra makes this series particularly important (Tobler 1950: ch. 6). A brief synopsis of the cultural sequence follows. While the Ubaid begins with stratum XIX, seals are common only from stratum XIII and they are particularly abundant in strata XII (Terminal Ubaid) and XI, but drop off markedly with stratum X (Tobler 1950: 175). The seals in stratum XIII (Late Chalcholithic 1), which has temple-like structures, show humanoids wearing headdresses or masks in association with animals and enigmatic signs (fig. 15.7a–b). Another seal (fig. 15.7c) shows three figures, possibly line dancing. This level has temple-like structures and multi-room residences. Stratum XII, representing the final northern Ubaid, "came to a sudden and violent end" (Tobler 1950: 25), as evidenced by bodies lying in the streets. Possible namash[4] are seen in figure 15.7d–e. One, with a bird-like beak, may be wearing both a mask and a sash, while the other shows two figures in motion with elongated (masked?) heads. Figure 15.7f features a fairly realistic depiction of a human figure walking with two saluki-like dogs, possibly a "domestic" scene. The seal showing two individuals drinking from a large jar may depict ritual, as seen in the later iconography of banquets (fig. 15.7g), and the theme is similar to a drawing on a Halaf-style vessel (Hijjara et al. 1980: fig. 342a). Following the destruction of stratum XII, the town was fortified in XIA (post-Ubaid, Late Chalcholithic 2), "the earliest level of a period characterized by unpainted pottery, tombs, and a distinctive type of temple architecture" (Tobler 1950: 25).

Despite these changes, the seals (fig. 15.7h–k) show much continuity with those in previous layers. As before, the individuals strike poses that suggest performance rather than mere locomotion, and they are associated with enigmatic signs. Figure 15.7h is a near duplicate of a seal from the Iranian site of Hajji Firuz, dated to the Ubaid-like Pisdeli period (Rothman 2001: fig. 1). Stratum XIA has a large round granary/fortress, which was burned, and there is no evident temple in this stratum. Stratum XI had a temple and craft and administrative buildings, as well as single-room houses. In stratum XI, in addition to namash figures there are scenes of ritual and the possible use of altars (fig. 15.7o–p; Tobler 1950: 183).[5] Figure 15.7o includes an arrow-shaped device, seen also at Susa, that in

[3] "Early Mesopotamians regarded the supernatural forces that controlled their world as mysterious and impersonal …. (They) believed that storms, rivers, lakes, marshes, mountains, sun, wind and fire were all living things" (Nemet-Nejat 1998: 178). Winter stresses that abundance and annual regeneration were symbolically expressed in several media during later millennia, even in the absence of the kind of changes that were taking place at the end of the fifth millennium (Winter 2007). Early in the fourth millennium, Mesopotamian religion worshiped the forces in nature, and city gods reflected local environmental circumstances (Jacobsen 1976: 73).

[4] Although the term "shaman" has been widely adopted as a generic term for individuals with supernatural powers to intervene on behalf of other humans, as Kehoe (2000) has persuasively argued, the original meaning of the term is restricted to healing; therefore I call the practitioners represented on fifth-millennium images "namash." Namash is a term without cultural baggage or implication beyond my definition here. The use of the term namash does not imply a "namashistic" religion. We cannot determine why the namash are handling dangerous creatures or dressed as they are, but it is reasonable to assume that they are involved in a public ritual designed to benefit individuals or groups or to show special qualities of leadership. Snake handling apparently was a long-lived tradition. We note, for example, that among the personnel attached to Ninurta's temple at Lagash, there was the snake charmer (Nemet-Nejat 1998: 190). Ninurta was god of the thunderstorm and spring flood, as well as of the plow (Jacobsen 1976: 127), qualities that underscore his value to an agrarian society. The fact that a snake charmer was attached to his temple indicates that such individuals continued to be valued into the third millennium B.C., and it is not much of a stretch to assume, as I do, that when a person is depicted holding snakes in the fifth millennium B.C., similar functions were being performed even if we do not know their specific nature.

[5] Tobler believed that the triangle shapes represented windows in a temple facade, based on ceramic vessels found in stratum XIII. He also referred to the objects in front of the figures as "horned altars" (Tobler 1950: 183, figs. 130:204, 132:228).

oi.uchicago.edu

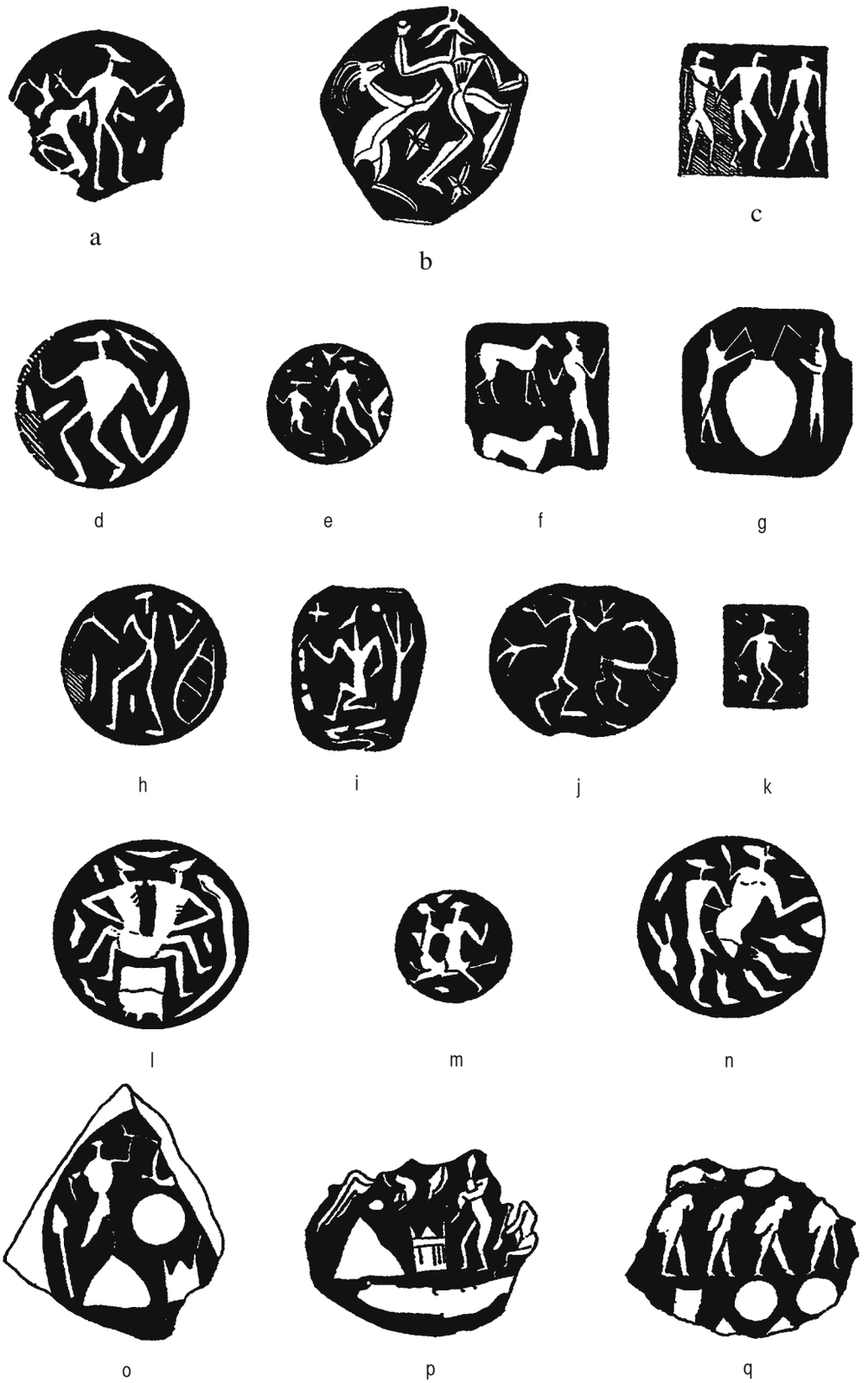


Figure 15.7. Seals from Tepe Gawra. (*a–c*): stratum XIII; (*d–g*): stratum XII; (*h–q*): stratum XI (from Tobler 1950)

oi.uchicago.edu

later contexts is known as the spade (agricultural tool) of the god Marduk (Hole 1983). These two seals incorporate iconographic elements that have counterparts on Ubaid ceramics as well as in later images. Figure 15.7q, a line of individuals possibly bearing loads, recalls Late Uruk scenes of workers filling granaries. Scenes of copulation evoke later images of the "sacred marriage" (fig. 15.7l–n).

In short, the seals from stratum XI at Tepe Gawra depict scenes that are more complex and iconographically rich than do those from earlier strata, implying an elaboration of ritual. That elements depicted here have clear counterparts in later periods implies that a long set of similar traditions began as early as the late fifth–early fourth millennium cal. B.C. Significantly, this elaboration occurs after the destruction of stratum XII and the end of the northern Ubaid pottery. In the following Early Uruk (Late Chalcholithic 2) strata X and IX, the temple became the central institution (Rothman and Peasnall 1999), and in these levels figurative seals — indeed, seals of any kind — are rare.

While Gawra has the only stratified series, a number of seals (fig. 15.8b–d) from Tepe Giyan in central highland Iran show individual namash, some with goat-horn headdresses and several who are framed by snakes (Amiet 1980: nos. 149–51). Gawra, Giyan, and single seals (fig. 15.8a) from Tell Asmar (Frankfort 1935: 29–30, fig. 30) and Telul eth-Thalathat (Fukai, Horiuchi, and Matsutani 1974: 51, pl. 38:4) all display similar themes in late Ubaid or Ubaid-like contexts.

Figure 15.8. Seals and sealings from various sites. (*a*) Tell Asmar (Frankfort 1935: fig. 30); (*b*) Tepe Giyan (Amiet 1980: pl. 7:49c); (*c*) Tepe Giyan (Amiet 1980: pl. 7:150); (*d*) Tepe Giyan (Amiet 1980: pl. 7:151); (*e*) Susa Acropole (Le Brun 1971: fig. 36:2); (*f–j*) Susa (Amiet 1972); (*k*) Susa (Amiet 1980: pl. 6:119); (*l*) Susa (Amiet 1980: pl. 6:124)

oi.uchicago.edu

Finally, we turn to Susa, which is approximately the same age as Late Chalcholithic 2 Gawra stratum XI. Only a handful of sealings have been recovered from Susa, one of which is from a 1970s excavation and thus is securely in a Susa A context (fig. 15.8e; Le Brun 1971). This shows the classic "master of snakes" motif, a theme that is seen on the Giyan seals but, unlike Giyan, shows the master, wearing a horned headdress, firmly in control by grasping the snakes.

Apart from this sealing, we have only a handful of others from Susa that date to the period and perhaps its very end (Amiet 1972). One group shows the familiar theme of "master of animals" in its classic form, where the namash grasps the creatures (fig. 15.8f–g). In figure 15.8g and k, we see the master, with horned headdress, grasping lions. In the third millennium and later, powerful individuals were often shown controlling lions and bulls. Unlike their counterparts at Gawra and Giyan, the Susa seals show details of dress, including the wearing of pectoral disks (fig. 15.8f, i), thus providing a use for the copper disks found in the cemetery. A plethora of enigmatic symbols also occur in these depictions, implying a much richer iconography than in the Ubaid sites. Other sealings show ceremonies in which a number of individuals perform (fig. 15.8h–j). The latter examples are especially interesting in that they also show dress and the use of beakers and bowls like those found in the cemetery (fig. 15.8i–j). More importantly, they also show hierarchical relations among participants with principal figures flanked by smaller attendants. The spaces among the figures are filled with other elements that may have iconographic significance.

In short, ritual at the end of the Susa A period appears more elaborate and more complex than at sites where only namash are depicted. One seal, figure 15.8k, has two sides. On the obverse a horned master holds two lions, and quiver-shaped elements that are also seen on ceramics fill spaces around the figures. The reverse depicts a kneeling person wearing a tall headdress, holding a beaker as if making an offering to some strange stick figures. A second seal, figure 15.8l, shows a seated figure with a bulbous headdress also making a presentation to similar stick figures, and there are two human attendants standing by. In these cases the principal figure is kneeling or seated, unlike the poses on the other seals. Since other figurative elements on the sealings are realistic, it implies that the stick figures depict or symbolize something mythological or imagined to be real, perhaps representing supernatural forces constructed in the form of animals. That one of these offering scenes occurs on the reverse of a seal that shows a public ceremony is important for it shows that more than one type of ritual was being practiced. Perhaps the figures presenting to the stick figures are doing so inside a "temple," out of sight of the public. In short, the depictions on seals from Susa show a range of activities and complexity that is unprecedented in the Near East.

In addition to the seals and sealings, there are two other sources of information on fifth-millennium ritual and role, figurines and temples. The most convincing series of temples is at the site of Eridu, the legendary first city of Mesopotamia (Safar, Mustafa, and Lloyd 1981). These temples already had the architectural features that were found in fourth-millennium and later temples. One would expect, based on this evidence, that there are also older temples to be found in Susiana, perhaps at Choga Mish. While temples give evidence of communal activity, they do not shed light on the actual practices. The other line of evidence is the few Late Ubaid figurines of individuals with elongated heads and coffee-bean eyes (Lloyd 1978: 47; Roaf 1990: 56; Safar, Mustafa, and Lloyd 1981: fig. 115). These nude figures from Eridu, Ubaid, and Ur have applied or painted elements of decoration on the shoulders; a male figure carries a scepter, and a female carries a baby who also has an elongated head. It is noteworthy that from the neck down these figures are realistic, suggesting that the heads depict either mythical beings or individuals wearing masks.[6] Masks can conceal the identity of the ritual performer and help an individual in a performance that requires communication with gods or to impersonate powerful forces. In either case these may be considered ritual figures.

WHAT DOES THIS MEAN?

The evidence suggests that people at Susa engaged in a massive building campaign that resulted in the great platform, which one can plausibly connect to rituals that had become more elaborate and important. These developments occurred during a period of increasing duress, as evidenced by a region-wide decline in settlements, abandonment of

[6] Oates discusses head and hair styles and possible Samarran antecedents to the Ubaid figurines (Oates 1969: 128).

oi.uchicago.edu

regions of Iran, and the successive burnings of the buildings atop the great platform (Hole 1987; Kouchoukos and Hole 2003). The end of Susa recalls similar destruction episodes at Tepe Gawra, as well as Tappeh Sialk (Amiet 1985; Ghirshman 1938: 79) and Tall-i Bakun (Alizadeh 2005; Langsdorf and McCown 1942) on the plateau, and Choga Mish (Kantor 1976) some centuries earlier. During a period of settlement shifts across the Susiana Plain, at a time when the population was near its peak, people moved to Susa and constructed a small platform as one of their first acts. After perhaps a few generations, they erected the largest construction of its time in the ancient world. The scale of the platform is impressive; the bricks contained within it would cover 5.5 ha to a depth of 1 m. A comparison with the latest Ubaid temple at Eridu is instructive: the latter's plinth covered 375 sq. m.

This monument must have been constructed by and for the good of the community, perhaps for all of Susiana. We may surmise that the old tradition of namash practices that had been employed for centuries at Gawra, Sialk, and Susa was no longer deemed sufficient. Mastery of snakes no longer turned the trick. At Susa, leaders determined that only ceremonies of sacrifice and supplication carried out on top of platforms would impress the forces that could not be controlled by secular human effort. An elaborate set of rituals, with participation by numerous individuals under the direction of priests, emerged (fig. 15.9). Ultimately they were unsuccessful, for Susa was abandoned, as were other large contemporary sites in Iran, such as Sialk and Bakun, where life resumed later at adjacent sites. It is my contention that a similar fate had already befallen Eridu and probably other settlement sites on the alluvium that were abandoned but perhaps not destroyed.

In Wallace's terms (Wallace 1966: 87), there has been a shift from individualistic to communal cults. The Susa sealings showing leaders and acolytes represent the first depictions of what we may consider to have been formal religious rites. There is institutionalization of ritual, with designated practitioners who hold different rank and have dress and artifacts symbolic of their office. Now we have iconography, the meaning of which is obscure, but which includes life forms such as lions and swordfish, and perhaps astral symbols. The "failure" of the monument at Susa resulted from a misplaced emphasis on the ability of priests to influence forces, whether natural or human, which affected the viability of life. Periodically, failure of ritual to protect the people led to hostilities and destruction of the monuments, but with few alternatives, people reverted to intensification rather than to complete change. Ultimately,

Figure 15.9. Reconstruction drawing of ritual ceremony on top of the Susa platform, based on sealings and ceramic vessels from the cemetery. By Cherra Wyllie

oi.uchicago.edu

they did change, and more control was put in human hands, as evidenced by scenes on fourth-millennium Uruk sealings of co-operative work groups, storerooms, and warfare (Amiet 1972: e.g., figs. 621, 646, 660, 663). Gone in the Uruk period are depictions of individual practitioners (Pittman 2001: figs 11.8, 11.10), although they may have continued to serve special purposes.

In sum, I see the events at the end of the fifth millennium as representing a monumental collapse in the two senses I have used the term. The buildings atop the platform were destroyed, and the platform was abandoned for ritual use; and ritual itself, as well as social relations, changed markedly in the following centuries. During the fifth millennium, as problems increased, so did ritual, in a spiral of intensification that ultimately failed, but laid the groundwork for later elaborations of religious ritual that have continued to this day, designed to win the favor of the gods, or god, and to make an awesome impression on humans.

EPILOGUE

Not all regions in the greater Ubaid sphere collapsed, at least not in the fashion of Susa. Northern Mesopotamia underwent a transition to a post-Ubaid (Late Chalcholithic 2) set of ceramics, preceded in some cases, as at Gawra, by destruction and rebuilding that featured fortifications, but not large temple platforms. Tells Hamoukar and Brak, in northeast Syria, both have evidence of monumental constructions and iconography that have given rise to the claim that states arose earlier in the north than in the south (Emberling and McDonald 2001; Gibson and Maktash 2000; Lawler 2006; Oates 2002; www-news.uchicago.edu/releases/05/051216.hamoukar.shtml). It seems clear, despite the sparse radiocarbon record, that Susa, and perhaps Tall-i Bakun, carried on with the old "Ubaid" traditions for some centuries after they had faded in the north (Hole 2001). This underscores the need to examine each region in its own terms. Ubaid-style ceramics and even true Ubaid ceramics were widely distributed, but the processes by which this occurred remain largely a topic for research. For example, in the region of the middle Khabur River of Syria, there are half a dozen sites with ceramics that display close parallels with those from southern Mesopotamia (Hole 2000; Thuesen 2000). The ceramics and sites themselves appear with no apparent Ubaid antecedents, and after some centuries they change locally into the post-Ubaid (Late Chalcholithic 2; Hole 2001). At other sites in the Khabur, such as Tell Leilan, the ceramics are better described as Ubaid related (Schwartz 1988). In the first case, we may see actual immigration of people, whereas in the latter, emulation may be a better explanation. It should be noted that the climatic and environmental changes that affected southern and western Iran had little, if any, direct impact on the north, although unrest in the south may have encouraged emigration to, for example, the middle Khabur. If a temple platform, or major temple, equivalent to that of Susa is to be found in the Khabur, it most certainly will be at Tell Brak, perhaps under the Late Chalcholithic 3 Eye Temple.

ACKNOWLEDGMENTS

I thank Cherra Wyllie for the reconstruction drawings shown in figures 15.1 and 15.9, and for her stimulating discussions of iconography and symbolism. Joyce Marcus kindly offered some useful suggestions and references.

BIBLIOGRAPHY

Adams, Robert McC.

1962 "Agriculture and Urban Life in Early Southwestern Iran." *Science* 136: 109–22.

Akkermans, Peter M. M. G.

1988 "The Period IV Pottery." In *Hammam et-Turkman*, Volume 1: *Report on the University of Amsterdam's 1981–84 Excavations in Syria*, edited by M. N. van Loon, pp. 181–285. Leiden: Nederlands Historisch-Archaeologisch Instituut te Istanbul.

oi.uchicago.edu

Akkermans, Peter M. M. G., and Marc Verhoeven

1995 "An Image of Complexity: The Burnt Village at Late Neolithic Sabi Abyad, Syria." *American Journal of Archaeology* 99: 5–32.

Alizadeh, Abbas

1996 *Chogha Mish*, Volume 1: *The First Five Seasons, 1961–1971*. Oriental Institute Publications 101. Chicago: The Oriental Institute.

2003 *Chogha Mish*, Volume 2: *The Development of a Prehistoric Regional Center in Lowland Susiana, Southwestern Iran; Final Report on the Last Six Seasons of Excavations, 1972–1978*. Oriental Institute Publications 130. Chicago: The Oriental Institute.

2005 *The Origins of State Organizations in Prehistoric Highland Fars, Southern Iran: Excavations at Tall-e Bakun*. Oriental Institute Publications 128. Chicago: The Oriental Institute.

Alizadeh, Abbas; Nicholas Kouchoukos; Tony J. Wilkinson; A. M. Bauer; and Marjan Mashkour

2004 "Human-environment Interactions on the Upper Khuzistan Plains, Southwest Iran: Recent Investigations." *Paléorient* 30: 69–88.

Amiet, Pierre

1972 *Glyptique Susienne des origines à l'époque des Perses Achéménides: Cachets, sceaux-cylindres et empreintes antiques découverts à Suse de 1913 à 1967*. Mémoires de la Délégation archéologique en Iran 43. Paris: Geuthner.

1980 *La glyptique mésopotamienne archaïque*. 2nd edition. Paris: Éditions du Centre National de la Recherche Scientifique.

1985 "La période IV de Tepe Sialk reconsidéré." In *De l'Indus aux Balkans: Recueil à la mémoire de Jean Deshayes*, edited by J.-L. Huot, M. Yon, and Y. Calvet, pp. 293–312. Paris: Éditions recherches sur les civilisations.

Canal, D.

1978a "La haute terrasse de l'Acropole de Suse." *Paléorient* 4: 169–76.

1978b "Travaux à la terrasse haute de l'Acropole de Suse (1)." *Cahiers de la Délégation archéologique Française en Iran* 9: 11–55.

Contenau, Georges, and Roman Ghirshman

1935 *Fouilles de Tépé-Giyan*. Musée du Louvre, Département des Antiquités Orientales, Série archéologique 3. Paris: Geuthner.

de Morgan, Jacques

1909 "Note sur les anciens vestiges de la civilisation susienne." *Revue d'Assyriologie et d'Archéologie orientale* 7: 1–10.

1912 "Observations sur les couches profondes de l'Acropole de Suse." *Mémoires de la Mission archéologique en Iran* 29: 3–161.

Dollfus, Genevieve

1978 "Djaffarabad, Djowi, Bendebal: Contribution à l'étude de la Susiane au 5^{e} millénaire et au début du 4^{e} millénaire." *Paléorient* 4: 141–67.

Emberling, Geoff, and Helen McDonald

2001 "Excavations at Tell Brak, 2000: Preliminary Report." *Iran* 63: 21–54.

Frankfort, Henri

1935 *Oriental Institute Discoveries in Iraq, 1933/34: Fourth Preliminary Report of the Iraq Expedition*. Oriental Institute Communications 19. Chicago: University of Chicago Press.

Fukai, Shinji; Kiyoharu Horiuchi; and Toshio Matsutani

1974 *Telul eth-Thalathat*, Volume 3: *The Excavation of Tell V; The Fourth Season (1965)*. The Tokyo University Iraq-Iran Archaeological Expedition, Report 15. Tokyo: Institute of Oriental Culture, University of Tokyo.

Garfinkel, Yosef

2003 *Dancing at the Dawn of Agriculture*. Austin: University of Texas Press.

oi.uchicago.edu

Gasche, Hermann H., and Michel Tanret, editors
1999 *Changing Watercourses in Babylonia: Towards a Reconstruction of the Ancient Environment in Lower Mesopotamia*. Mesopotamian History and Environment, Series 2, Memoirs 5. Ghent: Ghent University; Chicago: The Oriental Institute.

Ghirshman, Roman
1938 *Fouilles de Sialk, près de Kashan 1933, 1934, 1937*. Département des Antiquités Orientales, Série archéologique 4. Paris: Geuthner.

Gibson, McGuire, and Muhammad Maktash
2000 "Tell Hamoukar: Early City in Northeastern Syria." *Antiquity* 74: 477–78.

Hijjara, Ismail; J. P. N. Watson; R. H. L. B. Hubbard; and C. Davies
1980 "Arpachiyah 1976." *Iraq* 42: 131–54.

Hole, Frank
1983 "Symbols of Religion and Social Organization at Susa." In *The Hilly Flanks and Beyond: Essays on the Prehistory of Southwestern Asia Presented to Robert J. Braidwood, November l5, 1982*, edited by T. C. Young, P. E. L. Smith, and P. Mortensen, pp. 315–34. Studies in Ancient Oriental Civilization 36. Chicago: The Oriental Institute.
1989 "Patterns of Burial in the Fifth Millennium." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 149–80. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.
1990 "Cemetery or Mass Grave? Reflections on Susa I." In *Contribution à l'histoire de l'Iran: Mélanges offerts à Jean Perrot*, pp. 1–14. Paris: Éditions recherches sur les civilisations.
1994 "Environmental Instabilities and Urban Origins." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 121–51. Monographs in World Archaeology 18. Madison: Prehistory Press.
2000 "The Prehistory of the Khabur." In *La Djéziré et l'Euphrate Syriens de la protohistoire à la fin du II^e millénaire av. J.-C.: Tendances dans l'interprétation historique des données nouvelles*, edited by O. Rouault and M. Wäfler, pp. 17–27. Subartu 7. Turnhout: Brepols.
2001 "A Radiocarbon Chronology for the Middle Khabur, Syria." *Iraq* 63: 67–98.

Hole, Frank, editor
1987 *The Archaeology of Western Iran: Settlement and Society from Prehistory to the Islamic Conquest*. Smithsonian Series in Archaeological Inquiry. Washington, D.C.: Smithsonian Institution Press.

Jacobsen, Thorkild
1976 *The Treasures of Darkness: A History of Mesopotamian Religion*. New Haven: Yale University Press.

Kantor, Helene J.
1976 "The Excavations at Coqa Mis, 1974–1975." *Proceedings of the 4th Annual Symposium on Archaeological Research in Iran* 4: 23–41.

Kehoe, Alice Beck
2000 *Shamans and Religion: An Anthropological Exploration in Critical Thinking*. Prospect Heights: Waveland Press.

Kouchoukos, Nicholas
1998 Landscape and Social Change in Late Prehistoric Mesopotamia. Ph.D. dissertation, Yale University.

Kouchoukos, Nicholas, and Frank Hole
2003 "Changing Estimates of Susiana's Prehistoric Settlement." In *Yeki Bud, Yeki Nabud: Essays on the Archaeology of Iran in Honor of William M. Sumner*, edited by N. F. Miller and K. Abdi, pp. 53–59. Cotsen Institute of Archaeology Monograph 48. Los Angeles: Cotsen Institute of Archaeology.

Kouchoukos, Nicholas; Ronald Smith; Art Gleason; P. Thenkabail; Frank Hole; Y. Barkoudah; P. Gluhosky; and J. Foster
1998 "Monitoring the Distribution, Use, and Regeneration of Natural Resources in Semi-arid Southwest Asia." In *Transformations of Middle Eastern Natural Environments: Legacies and Lessons*, edited by J.

oi.uchicago.edu

Albert, M. Bernardsson and R. Kenna, pp. 467–91. Yale School of Forestry and Environmental Studies 103. New Haven: Yale University Press.

Langsdorff, Alexander, and Donald E. McCown
1942 *Tall-i-Bakun A: Season of 1932*. Oriental Institute Publications 59. Chicago: University of Chicago Press.

Lawler, A.
2006 "North versus South, Mesopotamian Style." *Science* 312: 1458–63.

Le Breton, L.
1947 "Notes sur la céramique peinte aux environs de Suse à Suse." *Mémoires de la Mission archéologique de Perse* 30: 193–217.
1957 "The Early Periods at Susa: Mesopotamian Relations." *Iraq* 19: 79–124.

Le Brun, A.
1971 "Recherches stratigraphiques à l'acropole de Suse (1969–1971)." *Cahiers de la Délégation archéologique Française en Iran* 1: 163–216.

Lloyd, Seton
1978 *The Archaeology of Mesopotamia: From the Old Stone Age to the Persian Conquest*. London: Thames & Hudson.

Mecquenem, Roland de
1928 "Notes sur la céramique peinte archaïque en Perse." *Mémoires de la Délégation Perse en Iran* 20: 99–132.
1943 "Fouilles de Suse, 1933–39." *Mémoires de la Mission archéologique en Iran* 29: 3–161.

Musée du Louvre
2001 *Les recherches archéologiques Francaises en Iran: 20 Octobre au 21 Novembre 2001*. Tehran: Musée du Louvre, Institut Française de Recherche en Iran, Musée National d'Iran.

Nemet-Nejat, Karen Rhea
1998 *Daily Life in Ancient Mesopotamia*. Daily Life Through History. Westport: Greenwood Press.

Oates, David, and Joan Oates
1997 "Recent Excavation at Tell Brak." In *La Djéziré et l'Euphrate Syriens de la protohistoire à la fin du II^e millénaire av. J.-C.: Tendances dans l'interprétation historique des données nouvelles*, edited by O. Roualt and M. Wäfler, pp. 105–10. Subartu 7. Turnhout: Brepols.

Oates, Joan
1960 "Ur and Eridu, the Prehistory." *Iraq* 22: 32–50.
1969 "Choga Mami, 1967–68: A Preliminary Report." *Iraq* 31: 115–52.
2002 "Tell Brak: The 4th Millennium Sequence and Its Implications." In *Artefacts of Complexity: Tracking the Uruk in the Near East*, edited by J. N. Postgate, pp. 111–22. Iraq Archaeological Reports 5. Warminster: British School of Archaeology in Iraq.

Perrot, Jean
1975 "Les fouilles de Sus en 1975." *Annual Symposium on Archaeological Research in Iran* 4: 224–31.

Pittman, Holly
2001 "Mesopotamian Intraregional Relations Reflected through Glyptic Evidence in the Late Chalcolithic 1–5 Periods." In *Uruk Mesopotamia and Its Neighbors: Cross-cultural Interactions in the Era of State Formation*, edited by M. S. Rothman, pp. 403–43. Santa Fe: School of American Research Press.

Porada, Edith; Donald Hansen; S. Dunham; and S. Babcock
1992 "Mesopotamian Chronologies 7000–1600 B.C." In *Chronologies in Old World Archaeology*, edited by R. W. Ehrich, vol. 1: pp. 77–121. 3rd edition. Chicago: University of Chicago Press.

Roaf, Michael
1990 *Cultural Atlas of Mesopotamia and the Ancient Near East*. New York: Facts on File.

oi.uchicago.edu

Rothman, Mitchell S.

2001 "The Tigris Piedmont, Eastern Jazira, and Highland Western Iran in the Fourth Millennium B.C." In *Uruk Mesopotamia and Its Neighbors: Cross-cultural Interactions in the Era of State Formation*, edited by M. S. Rothman, pp. 349–401. Santa Fe: School of American Research Press.

2002 "Tepe Gawra: Chronology and Socio-economic Change in the Foothills of Northern Iraq in the Era of State Formation." In *Artefacts of Complexity: Tracking the Uruk in the Near East*, edited by J. N. Postgate, pp. 49–77. Warminster: British School of Archaeology in Iraq.

Rothman, Mitchell S., and B. Peasnall

1999 "Societal Evolution of Small, Pre-state Centers and Polities: The Example of Tepe Gawra in Northern Mesopotamia." *Paléorient* 25: 101–14.

Safar, Fuad; Mohamed A. Mustafa; and Seton Lloyd

1981 *Eridu*. Baghdad: Ministry of Culture and Information.

Sanlaville, Paul

1997 "Les changements dans l'environnement au Moyen-Orient de 20,000 B.P. à 6,000 B.P." *Paléorient* 23: 249–62.

Schwartz, Glenn M.

1988 *A Ceramic Chronology from Tell Leilan, Operation 1*. Yale Tell Leilan Research 1. New Haven: Yale University Press.

Stève, M.-J., and Hermann H. Gasche

1971 *L'Acropole de Suse: Nouvelles fouilles (rapport préliminaire)*. Mémoires de la Délégation archéologique en Iran 46. Paris: Geuthner.

1990 "Le Tell de l'Apadana avant les Acheminides." In *Contribution à l'histoire de l'Iran: Mélanges Jean Perrot*, edited by F. Vallat pp. 15–61. Paris: Éditions recherches sur les civilisations.

Thuesen, Ingolf

2000 "Ubaid Expansion in the Khabur: New Evidence from Tell Mashnaqa." In *La Djezire et l'Euphrate Syriens de la protohistoire à la fin du II^e millénaire av. J.-C.: Tendances dans l'interprétation historique des données nouvelles*, edited by O. Rouault and M. Wäfler, pp. 71–79. Subartu 7. Turnhout: Brepols.

Tobler, Arthur J.

1950 *Excavations at Tepe Gawra*, Volume 2: *Levels IX–XX*. Publications of the Baghdad School, Excavations 1. Philadelphia: University of Pennsylvania Press.

Ur, Jason A.

2002 "Surface Collection and Offsite Studies at Tell Hamoukar, 1999." *Iraq* 64: 15–43.

Wallace, Anthony F. C.

1966 *Religion: An Anthropological View*. New York: Random House.

Winter, Irene

2007 "Representing Abundance: The Visual Dimension of the Agrarian State." In *Settlement and Society: Essays Dedicated to Robert McCormick Adams*, edited by E. C. Stone, pp. 117–38. Ideas, Debates and Perspectives 3. Los Angeles: Cotsen Institute of Archaeology, University of California; Chicago: The Oriental Institute.

oi.uchicago.edu

16

UBAID-RELATED-RELATED? THE "BLACK-ON-BUFF" CERAMIC TRADITIONS OF HIGHLAND SOUTHWEST IRAN

LLOYD WEEKS, *University of Nottingham*
CAMERON A. PETRIE, *University of Cambridge*
DANIEL T. POTTS, *University of Sydney*

INTRODUCTION

Most discussions of the Ubaid cultural horizon have paid relatively little attention to the black-on-buff painted ceramic traditions that prevailed in many regions of highland Iran during the fifth millennium B.C. Here we partially redress this oversight by discussing the black-on-buff painted ceramics of this period from highland southwest Iran, in modern-day Fars province. These are typically referred to as Bakun ceramics and attributed to the Bakun period, with the name being derived from the site of Tall-i Bakun A in the Marv Dasht area of the Kur River Basin where such pottery was first recorded in the late 1920s (Herzfeld 1929; Schmidt 1937, 1939; Langsdorff and McCown 1942).

By definition and common usage, "Bakun" is a multivalent term, functioning in different instances as a geographical, chronological, and/or cultural signifier. Archaeologically, the Bakun period is defined largely by the presence of distinctive black-on-buff painted ceramic vessels that often have elaborate geometric and figural decoration. However, fundamental questions exist about the extent of the Bakun ceramic horizon in time and space, and its relationship to actual human behavior in fifth-millennium B.C. Fars. Key unresolved (and often uninvestigated) issues that pervade our understanding of the Bakun period include the following:

1) the absolute and relative chronology of the various ceramic assemblages that have been amalgamated under the Bakun umbrella;
2) the extent to which the geographical region purportedly covered by the Bakun ceramic horizon was actually integrated;
3) the types of social and economic behavior that were taking place during the Bakun period and whether these changed through time; and
4) the relationship between the Bakun ceramic horizon and contemporary neighboring ceramic traditions to the north, south, east, and west, also characterized by black-on-buff pottery.

As these issues are but regional manifestations of the questions that concern the vast Ubaid black-on-buff ceramic horizon itself — echoing the prime research themes identified at the Durham conference — Bakun material and Bakun society clearly deserve a place in the larger debate on the Ubaid cultural horizon. Perhaps the most productive way to answer questions posed on such a broad geographical scale is to address specific regional components, as outlined here for the Bakun ceramic horizon. By attempting to "think globally and act locally," we hope that the end result of our investigation of regional differences will be the recognition of the fundamental connections and shared developments that constitute the Ubaid phenomenon.

oi.uchicago.edu

TRAPPED IN TERMINOLOGY: IRAN AND THE UBAID

The term "Ubaid period" originated in 1930 at a conference in Baghdad, where it was decided to adopt type-site names for the prehistoric occupation phases that had been identified in Iraq (Potts 1986: 20–21). In its original incarnation, the word was primarily used to denote the distinctive black-on-buff painted ceramic assemblage found at Tell al-Ubaid and Ur (e.g., Lloyd 1978: 44–45; Hall and Woolley 1927). With further excavations at Hajji Mohammad, Eridu, Tell 'Uqair, Tell Madhhur, Tell Abada, and Tell el 'Oueili, other distinctive features such as tripartite houses, temples, clay mullers, and clay sickles became canonical (e.g., Lloyd 1978: 41–45, fig. 14; Margueron 1989; Roaf 1989; G. J. Stein 1994). To this, a number of technological innovations have now been added, such as the use of the slow wheel (tournette or "pivoted working surface"), which is relevant to our understanding of the production economy (Nissen 1988: 46–47, 1989: 248–49). The terminology "Ubaid related" has now become commonplace in discussions of the archaeology of contemporary communities adjacent to the perceived Ubaid heartland of southern Mesopotamia (e.g., Pollock 1989: 281; Henrickson 1989: 369; Beech and Elders 1999; Yener 2005).

The use of such terminology is, however, problematic, not least with regard to its inherent core-periphery bias. The very concept of a coherent Mesopotamian Ubaid cultural assemblage to which others might be related is questionable, and further difficulties arise from the fact that various elements of the southern Mesopotamian Ubaid "package" have strongly contrasting distributions in the archaeological record of neighboring regions. As a result, many of the major issues of interpretation surrounding the Ubaid period in Mesopotamia, such as the origins of incipient state-level social complexity, the development of religious architecture and ideology, and the beginnings of irrigation agriculture, are not necessarily relevant to the discussion of other regions, including Bakun-period Fars. In light of such clear regional differences, efforts to understand regional material assemblages from the perspective of how they relate to Ubaid Mesopotamia could be inappropriate and misleading.

In many respects, when discussing the ceramic material for this period in general, we are on firmer terminological ground if we speak of a "black-on-buff ceramic horizon," as this is the only material trait that characterizes all subdivisions of the broader Ubaid phenomenon. A series of broadly contemporary black-on-buff painted ceramic traditions unquestionably existed across an area stretching from southern Turkey to southeastern Iran. These ceramics have often been presented as the dominant (if not only) material proxy for the scale and nature of interaction between Chalcolithic communities over this vast area.

From the outset, the broad similarity between the Mesopotamian and lowland Iranian ceramics was noted. When the name "Ubaid" was adopted for the black-on-buff painted wares of southern Mesopotamia, scholars primarily looked to Susiana for comparanda, and the Susa A/I pottery excavated by de Morgan was directly compared to the Ubaid material (e.g., Potts 1986: 20ff., for references). In many ways, it has proven difficult to move on from this perspective. In *Upon this Foundation: The 'Ubaid Reconsidered*, two of the four papers dealing explicitly with the cultural traditions of fifth-millennium B.C. Iran focused solely upon lowland Susiana (Berman 1989; Pollock 1989). Significantly, both were included in "Section 3: Ubaid Economic and Political Developments," rather than in "Section 5: Adjacent Regions during the Ubaid." Similarly, Hole's analysis of burial patterns in the fifth millennium B.C. combined the evidence from southern Mesopotamia and Susiana under one heading (Hole 1989: 164ff.). This says much about perceptions of similarities between the Mesopotamian and Iranian lowlands, and it may well reflect the ongoing perception that Susiana is no more than an eastern cultural extension of the Mesopotamian alluvium in some periods (e.g., Algaze 2005: 11).

There is a danger of overstating the similarities between the southern Mesopotamian and Susian material, and distinctive black-on-buff painted ceramic traditions were in use in many areas of Iran outside Susiana (reviewed in Voigt and Dyson 1992), all of which could be attributed to a broader black-on-buff ceramic horizon. Beginning in the northern Zagros, there is evidence for the use of black-on-buff painted ceramics in the Hasanlu VIII (Pisdeli) period in the Ushnu-Solduz Valley close to Lake Urmia (Voigt and Dyson 1992: vol. 1, 174–75); the Siahbid and Maran phases in the Mahidasht Plain (Voigt and Dyson 1992: vol. 1, 158); the Godin X–VIII (Dalma, Seh Gabi, and Teherabad) phases in the Kangavar Valley (Voigt and Dyson 1992: vol. 1, 160); the Sialk III_{4-7} period in the Kashan/Qazvin regions (Voigt and Dyson 1992: vol. 1, 167–68; Helwing 2005); the Chalcolithic phase in the Pish-i Kuh (Goff 1971); the Parchinah and Hakalan cemeteries in the Pusht-i Kuh region (Voigt and Dyson 1992: vol. 1, 153; also Haerinck and Overlaet 1996); the Middle Chalcolithic occupation in the Hulailan Valley (Voigt and Dyson 1992: vol. 1, 155–56); the Sabz, Khazineh, Mehmeh, Bayat, Farukh, and post-Farukh phases in Deh Luran (Voigt and Dyson 1992: vol. 1, 126–27); the Early, Middle, and Late Susiana phases in Susiana, Shushtar, and Ram Hormuz (Voigt and Dyson 1992: vol. 1, 130–32; Weiss 1976; Berman 1987, 1989; Alizadeh 1992; Delougaz

oi.uchicago.edu

and Kantor 1996; Wright and Carter 2003; Moghaddam and Miri 2003, 2007; Moghaddam 2005); the Chalcolithic phase in Izeh-Malamir (Wright 1979); the Do Tolune and Sohz phases in the Behbehan and Zohreh regions (Nissen 1976; Dittman 1984: 35ff.); the Middle Chalcolithic phase in the Bakhtiari (Nissen and Zagarell 1976; Zagarell 1979, 1982); the phases characterized by black-on-buff ceramics in the Mamasani district (Weeks et al. 2006b; Petrie, Asgari Chaverdi, and Seyedin 2006a; Zeidi, McCall, and Khosrowzadeh 2006); the Early, Middle and Late Bakun periods in the Kur River Basin of central Fars (Voigt and Dyson 1992: vol. 1, 137–40; also Sumner 1994; Alizadeh 2003, 2006); the fifth-millennium B.C. sites of the Bushehr region on the Persian Gulf coast (Carter et al. 2006); Tall-i Pir in the Lamerd region (M. A. Stein 1937; Asgari Chaverdi 2001; Asgari Chaverdi et al. 2008); the fifth-millennium B.C. sites in Sarvistan, Fasa, and Darab (M. A. Stein 1936; Miroschedji 1972; Dittman 1986: 343–66; Kerner 1993); the Iblis II/Bard Sir phase in the Bard Sir Valley (Voigt and Dyson 1992: vol. 1, 144–45); the Yahya VI–VB period in the Soghun, Rud-i Gushk/Shah Maran-Daulatabad regions (Voigt and Dyson 1992: vol. 1, 148–49; Beale 1986; Prickett 1986); and at Chah Husaini and other sites in the Halil Rud region (M. A. Stein 1937). In combination, these assemblages can be considered to represent a very broadly spread eastern wing of the black-on-buff ceramic horizon of Chalcolithic western Asia (fig. 16.1). While black-on-buff ceramic traditions link this massive geographical area, it is important to emphasize that many of these assemblages are also characterized by different and unrelated wares indicative of both local continuity and regional variation (Voigt and Dyson 1992: vol. 1, 126–75).

As yet, there has been no systematic attempt to establish how these Iranian ceramic assemblages relate to each other in anything other than a chronological sense, and there is also no consensus as to how they might relate more broadly to Mesopotamian Ubaid cultural assemblages. In one of the few attempts to illustrate the latter relationships, Roaf (1990: 53) followed a traditional interpretation according to which the earliest Ubaid originated in southern Mesopotamia and spread out from there. His map identified Ubaid-related pottery in Susiana and to a limited extent

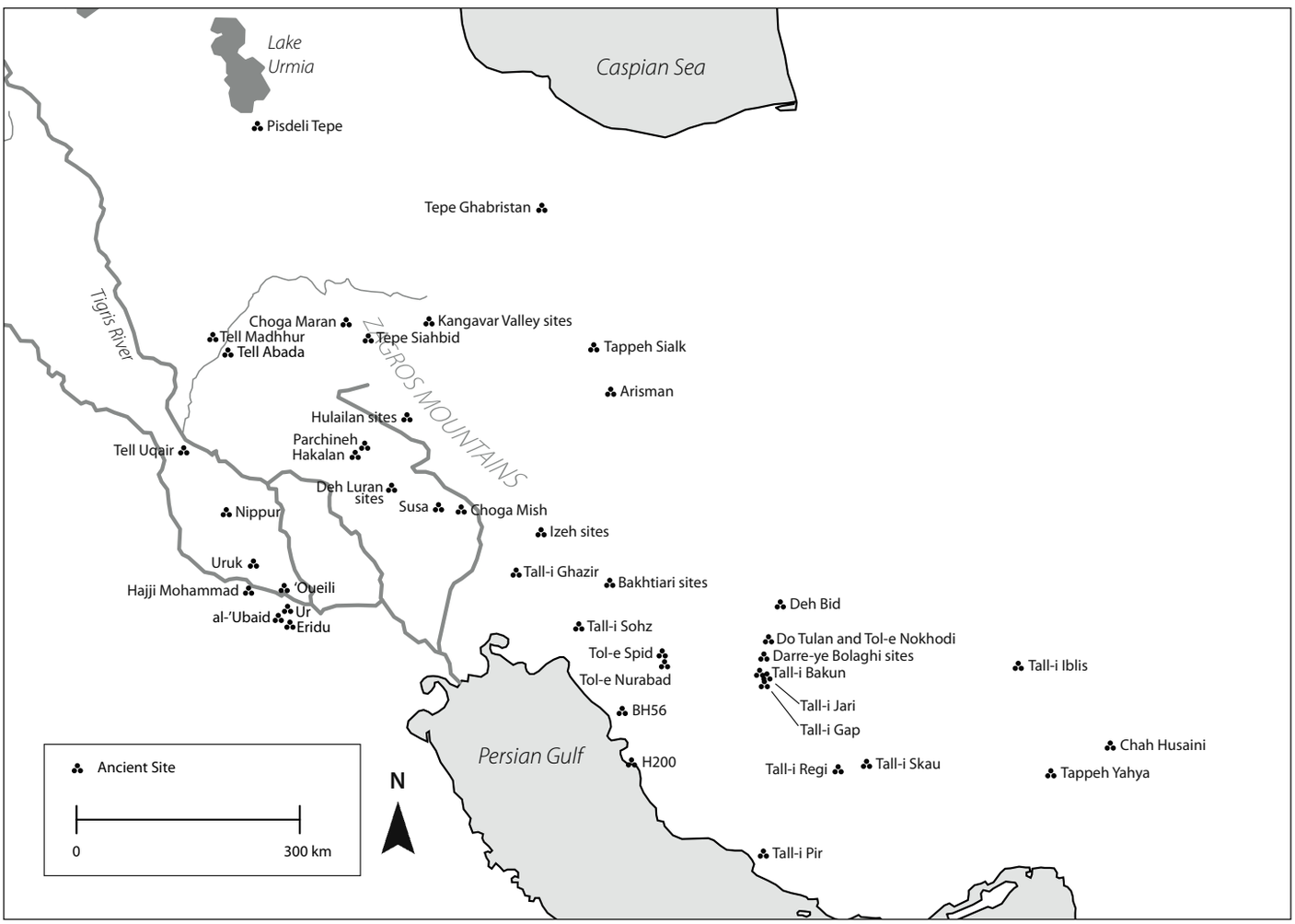


Figure 16.1. Map showing the principal regions of Iran and Mesopotamia discussed in the text

oi.uchicago.edu

near Lake Urmia. Although the locations of sites like Godin Tepe, Tappeh Sialk, Tall-i Bakun A, Tall-i Iblis, and Tepe Yahya were all indicated, none of the populations inhabiting the Zagros or the Central Plateau of Iran was regarded as being users of Ubaid-related pottery. In contrast, a far more focused study by Henrickson (1989: 398) referred to the black-on-buff ceramics of the central Zagros as Ubaid related, but emphasized that there was significant regional variation in both the Zagros and Mesopotamia, suggesting that there was no such thing as monolithic Ubaid or Ubaid-related cultural areas or economic systems. Both interpretations differ from Hole's (1989) suggestion that the northern, central, and southern Zagros all belong to an "Ubaid sphere."

Geography plays an important but often unstated role in the terminology used to describe and interpret the distribution of these ceramic assemblages. The northern and central Zagros are geographically contiguous with the lowlands of Mesopotamia, and the feasibility of direct contact between these regions may well justify the use of terms such as "Ubaid related" when describing the highland ceramic assemblages. However, problems with such terminology are manifest when we consider regions that are farther away from southern Mesopotamia, where one cannot assume direct contacts with Ubaid communities. As discussed below, the black-on-buff painted Bakun pottery of Fars Province shows a degree of stylistic derivation from Susiana material. As the Susiana assemblage can be considered *Ubaid related* (cf. Roaf 1990), then Bakun pottery might legitimately be described as *Ubaid-related-related*. And what of the black-on-buff painted ceramics from Tall-i Iblis and Tepe Yahya in southeast Iran, which lie to the east of the putative distribution of Bakun ceramics (Alizadeh 2003: fig. 7.1, 2006: fig. 5b)? Beale's analysis of the black-on-buff ceramics from Tepe Yahya (Beale 1986: 86–89) suggests a scenario in which early examples of black-on-buff ceramics were imported from the west (Fars province), followed by the development of an indigenous painted buff ware tradition. The latter tradition might theoretically, therefore, be described as *Ubaid-related-related-related*!

While admittedly flippant, this *reductio ad absurdum* nevertheless encapsulates a fundamental dilemma in understanding any archaeological phenomenon as geographically dispersed as the black-on-buff ceramic horizon: How do we adequately incorporate and explain variation in ceramic assemblages at our many geographic scales of analysis? It is clear that variation in ceramic assemblages is an issue not only on the pan-southwest Asian scale of the black-on-buff ceramic horizon, but also when dealing with its much smaller constituent regions and sub-regions (see, e.g., Akkermans and Schwartz 2003: 154ff.). For example, despite assertions that Bakun ceramics are particularly widespread throughout Fars province (e.g., Alizadeh 2003: 85, fig. 7.1, 2006: 51, fig. 5b), it remains to be demonstrated whether the black-on-buff ceramic assemblages in areas as diverse as the Kur River Basin, Fasa, Darab, Lamerd, Bushehr, and Mamasani form a stylistically and technologically coherent Bakun assemblage.

In the conclusion to her paper in *Upon this Foundation*, Henrickson (1989: 397–98) made several extremely pertinent observations. While emphasizing the necessity of a broad regional perspective in studying the Ubaid and "Ubaid-related" ceramics of southwest Asia, she also highlighted the fact that the Zagros highlands were an environmentally and culturally diverse mosaic with strong local material culture traditions (Henrickson 1989: 397). Her overall conclusion was that

> the various lowland and highland ceramic traditions and assemblages were not interacting and sharing stylistic information as parts of a single cultural or economic inter-regional 'Ubaid-driven "system." No single-cause explanation can account for the varied MDS [multi-dimensional scaling] patterns we have seen in lowland-highland ceramic stylistic similarity and isolation. Rather, a realistic understanding of these processes must attempt to pick apart the situation in each area at each time period, and deduce a unique set of causes or motivations behind each episode of cultural interaction. Only by recognizing this complexity will we ever approach realistic explanations for Zagros-Mesopotamian ceramic similarity patterns in the Middle Chalcolithic (Henrickson 1989: 398).

The major material focus of our present study — the Bakun black-on-buff ceramics from highland southwest Iran — can be regarded as one of the constituent assemblages comprising a black-on-buff ceramic horizon that characterizes large parts of Chalcolithic western Asia. Some of these ceramic traditions may reflect contacts between their producers and Ubaid Mesopotamia, thus justifying their description as Ubaid related. However, such contact is not clearly demonstrated for fifth-millennium B.C. Fars province. While acknowledging the possibility (and perhaps likelihood) that Bakun communities were entangled within social and economic developments that occurred across western Asia in the fifth millennium B.C., of which the black-on-buff ceramic horizon is a material residue, the term "Ubaid related" is not adopted to describe our material. Such terminology makes presumptions about not only the cultural, economic, and technological connections we are trying to delineate in the archaeological record, but also the dominant direction of transmission of knowledge and influence.

oi.uchicago.edu

BAKUN SOCIETY

A brief introduction to the nature of Bakun society in highland southwest Iran serves to further differentiate this region from contemporary lowland Mesopotamia. Bakun society is "Chalcolithic" in the sense that copper-base tools, weapons, and jewelry began to appear in increasing numbers alongside specific chipped-stone and ceramic technologies in the village settlements of fifth-millennium B.C. Fars. The most intensively investigated region characterized by the Bakun ceramic horizon is the Kur River Basin in central Fars, where black-on-buff painted ceramics have been recovered through excavation at the mounds of Tall-i Bakun A and B, Tall-i Jari A, Tall-i Gap, and Toll-e Bashi (Voigt and Dyson 1992: vol. 1, 137–40; also Alizadeh 2006; Bernbeck, Pollock, and Abdi 2004; Abdi, Pollock, and Bernbeck 2003). A substantial amount of Bakun pottery has also been recovered during surveys there, in particular those of Louis Vanden Berghe (1952, 1954) and William Sumner (1972, 1994). Outside the Kur River Basin, Bakun ceramics (better described as contemporaneous black-on-buff ceramics) have been found across large areas of Fars province (Alizadeh 2006: 49–55, fig. 5b) and adjacent regions, including at BH56 in the Bushehr hinterland, and related, though earlier, ceramics at H200 on the Bushehr Peninsula (Carter et al. 2006); at Tall-i Pir in the Lamerd district adjacent to the Persian Gulf coast to the south (M. A. Stein 1937; Asgari Chaverdi 2001; Asgari Chaverdi et al. 2008); at numerous sites including Tall-i Skau and Tall-i Regi in the Sarvistan, Fasa, and Darab Plains to the southeast (M. A. Stein 1936; Miroschedji 1972; Dittman 1986; Kerner 1993); at the site of Deh Bid (M. A. Stein 1936); at sites including Do-Tulan in the Pasargadae region (M. A. Stein 1936; Sami 1956; Goff 1963, 1964) and at sites in Darre-ye Bolaghi to the north and east (M. A. Stein 1936; Bernbeck, Fazeli, and Pollock 2005; Helwing and Seyedin 2006, 2007, this volume); at sites in some of the smaller valleys to the northwest of the Kur River Basin (Alizadeh 2003, 2006: 51–55); and finally at sites in the Mamasani district in the extreme northwest of Fars (Potts and Roustaei 2006; Potts et al. 2006; Weeks et al. 2006b; Petrie, Asgari Chaverdi, and Seyedin 2006a; Petrie et al. 2006; Zeidi, McCall, and Khosrowzadeh 2006; McCall 2009) (fig. 16.1).

The Bakun period is believed to have been the most intensive phase of prehistoric settlement in the Kur River Basin. Regional surveys indicate that occupation expanded consistently from the earliest ceramic Neolithic (Mushki phase: 8 sites) through the Middle (Jari phase: 50 sites) and Late Neolithic (Shamsabad phase: 108 sites) before reaching a peak in the Bakun period (175 sites) (Sumner 1994: table 1). Sumner (1988, 1994: tables 1, 3) has proposed that the Middle Bakun was the most intensively settled phase of settlement (85 sites), followed by a marked decrease in the Late Bakun period (65 sites). However, Alizadeh (2006: 49) has reattributed a subset of Sumner's survey sites and suggested that there was in fact a gradual increase in settlement numbers throughout the Bakun period, and a sharp increase in the subsequent Lapui period. These conflicting interpretations have significance for our understanding of prehistoric developments in Fars.

Bakun sites are generally small (< 1 ha), although three sites of 6.0–7.8 ha have been recorded (Sumner 1972: 256, 1994: table 2; Kole 1980: 85; also Abdi, Pollock, and Bernbeck 2003: 339). This implies the existence of a simple, two-tiered site hierarchy for the Kur River Basin (Sumner 1994: figs. 2–4; Alizadeh 2006: 19; contra Alizadeh 2003: 89–90), which is in marked contrast to both the preceding Neolithic and subsequent Lapui periods (Sumner 1988, 1990), where no such hierarchy has been observed. Excavations indicate that, as in the Neolithic period, Bakun-period settlements comprise multi-roomed, rectilinear structures of mudbrick, or *chineh*, with little unequivocal evidence for significant distinctions in building size or architectural elaboration, but some evidence for functional differences in building use within individual sites (e.g., Alizadeh 2006). No evidence for any Bakun temples or ritual structures has yet been recovered, although it has been suggested that such a building may have existed at Tall-i Bakun A (Fraser 2008).

Sites located in arable areas and linear distributions of Bakun-period settlements are taken to indicate that, as in the preceding Shamsabad period, agricultural production (perhaps supported by irrigation) was a major component of the subsistence base of Bakun settlements (Sumner 1990: 99–101, 1994: 51–59). Analyses of the botanical material from recent excavations at Tall-i Bakun A indicate that an agro-pastoral economy emphasizing grazing over farming was being practiced (Miller and Kimiaie 2006: 113), and faunal analyses from the same excavations attest to a well-developed pastoral component of the subsistence economy focused upon the exploitation of sheep and goat (Mashkour, Mohaseb, and Debue 2006: 105). Additionally, the exploitation of secondary animal products in the Bakun period is attested by the discovery of ceramic spindle whorls at sites including Tall-i Bakun A (Langsdorff and McCown 1942: 69, pl. 82), Tall-i Bakun B (Egami and Masuda 1962: pl. 4), and Tall-i Gap (Egami and Sono 1962: pl. 40), which contrasts with earlier Neolithic settlements in the region. Sumner (1994: 59) regards such indica-

oi.uchicago.edu

tors as evidence for the continued presence in the Kur River Basin of settled agricultural groups who also practised caprid-based pastoralism, perhaps with a component of seasonal transhumance.

Alizadeh has proposed a radically different interpretation of subsistence practices, in which the Bakun period witnessed the rise of a fully fledged nomadic pastoralist mode of subsistence. He argues that sites such as Tall-i Bakun A did not depend on irrigation agriculture and were in fact unable to generate an agricultural surplus from cereal cultivation to support specialized manufacturing (Alizadeh 2003: 89–90, 2006: 94–96; see also Alizadeh 1988a, 1988b). Furthermore, he has claimed that subsistence at settled Bakun-period sites relied upon the acquisition of the surplus production of nomadic pastoralist groups, and that Tall-i Bakun A provides evidence for the existence of complex pre-state formations based on mobile pastoralism in highland Iran during the fifth millennium B.C. (Alizadeh 1988b, 1994, 2003: 88–90, 2006: 94–96). This proposal is primarily based on the identification of camp sites dating to the Late Bakun phase, the claim that there was a low population density in this period, the absence of clear evidence for canal irrigation, and the assumption that large-scale agriculture capable of supporting industrial activity is only possible with irrigation (Alizadeh 2003: 89–90, 2006: 94–96). However, much of the evidence summoned by Alizadeh does not allow a conclusive discrimination of a generalized agro-pastoral economy from one that has specialized farmers and (long-range) herders. While there is evidence for an increased focus on caprids during the Late Bakun phase (Mashkour, Mohaseb, and Debue 2006: 105), agricultural surpluses are certainly possible without irrigation, and bioarchaeological samples from settled communities are unlikely to speak directly to the question of nomadic pastoralism (Miller and Kimiaie 2006: 107, 113). We also have relevant evidence from very few sites. Other archaeological data, such as site size, type, location, and internal differentiation, must be incorporated into the justification of such hypotheses, and in each of these cases the available data strongly support Sumner's more conservative claims for the existence of settled Bakun communities characterized by a mixed agro-pastoral subsistence base. We return to this issue in the discussion below.

Our understanding of Bakun-period social complexity is primarily based on the evidence from Tall-i Bakun A, where extensive evidence for metallurgy, interregional trade, craft specialization, planned architecture, segregation of activities, and the use of clay sealings was revealed (Langsdorff and McCown 1942; Alizadeh 2006). Sumner (1994: 60–62) regards the evidence for productive specialization and increased administrative control, combined with the indications of population growth, interregional integration, and an increased scale of socioeconomic integration, as evidence of hierarchically ranked kinship units that competed for power within the Bakun system. Alizadeh also regards the Bakun period as a critical stage in the development of social complexity in highland southwest Iran, although his conception of this development minimizes the role of kinship relations in political interactions. Rather, Alizadeh (1988b, 1994, 2003: 88–90, 2006: 83–90) argues that nomadic pastoralism was critical for the rise of complex pre-state formations in this period in highland Iran. In a discussion that draws heavily upon the evidence of administrative technology at Tall-i Bakun A, he writes,

> we consider the evidence of door sealings as indicative of a change in social structure that we can barely see archaeologically, i.e., a separation of kinship from economic and political considerations. Moreover, the internally specialized nature of the settlement at Tall-e Bakun A and the system of control exercised by some to limit access to certain parts of the community is taken as indicative of the presence of at least two class-endogamous strata (Alizadeh 2006: 17).

At present, it is impossible to verify conclusively either Sumner's or Alizadeh's reconstructions of Bakun sociopolitical structure. However, in this context, it is worth noting that the Bakun levels at the three largest Bakun-period sites in the Kur River Basin remain largely unexplored (Sumner 1994; Abdi, Pollock, and Bernbeck 2003; cf. Pollock, Bernbeck, and Abdi 2010). Our understanding of Bakun political, economic, and cultural interaction and integration will undoubtedly change once such large sites are investigated in detail.

THE MAMASANI ARCHAEOLOGICAL PROJECT

Since November 2002, a collaborative archaeological fieldwork program between the Iranian Center for Archaeological Research (ICAR) and the University of Sydney has been undertaken in the Mamasani district of northwestern Fars province. The Mamasani district is the name given to a series of small, inter-accessible mountain valleys at elevations of approximately 800–1,000 m above sea level on the western side of the Zagros (fig. 16.1).

oi.uchicago.edu

In total, the four major Mamasani valleys of Dasht-e Nurabad, Dasht-e Javid, Dasht-e Rostam-e Yek, and Dasht-e Rostam-e Do comprise approximately 250 sq. km of agricultural land (fig. 16.2). In addition to supporting intensive agriculture and a double-cropping regime (wheat/barley in winter and rice in summer), the Mamasani district lies in the temperate *motadel* zone and is exploited by nomadic pastoralist groups who bring their herds there from higher mountainous areas during the winter months (Roustaei, Alamdari, and Petrie 2006; also Beck 2003). Located more than 100 km to the west-northwest of the Kur River Basin, and more than 350 km southeast of Susiana, Mamasani is geographically peripheral to the major prehistoric population centers of southwest Iran and has received little previous archaeological attention.

In the following discussion, the cultural periodization and terminology developed for the Kur River Basin is used to describe the material from Mamasani. Although it is apparent that there is a long-term similarity between the archaeological assemblages of Mamasani and the Kur River Basin (Potts and Roustaei 2006), there are also differences, and these are more pronounced in some periods than in others (Petrie, Asgari Chaverdi, and Seyedin 2005; Weeks et al. 2006b). The terminology used for the Kur River Basin has been adopted in an attempt to avoid the further proliferation of regionally specific chronological terminology. However, this adoption creates a situation where the terminology implies an affinity between the ceramics from the two areas that may not necessarily be justified.

The reconnaissance survey and multiple stratigraphic soundings that have now been excavated in Mamasani have yielded cultural material of Neolithic through Islamic date. The results of the initial fieldwork are summarized in a monograph (Potts and Roustaei 2006; also Potts et al. 2009), and in a series of more focused articles that address regional issues related to settlement in the Neolithic (Weeks et al. 2006a), Lapui (Petrie, Sardari Zarchi, and Javanmard Zadeh 2007), Kaftari (Petrie, Asgari Chaverdi, and Seyedin 2005), and Achaemenid periods (Asgari Chaverdi et al. 2010; Potts et al. 2007). The material from Mamasani that can be dated to the fifth millennium B.C. consists predominantly of black-on-buff ceramics recovered from both excavation and survey (Potts and Roustaei

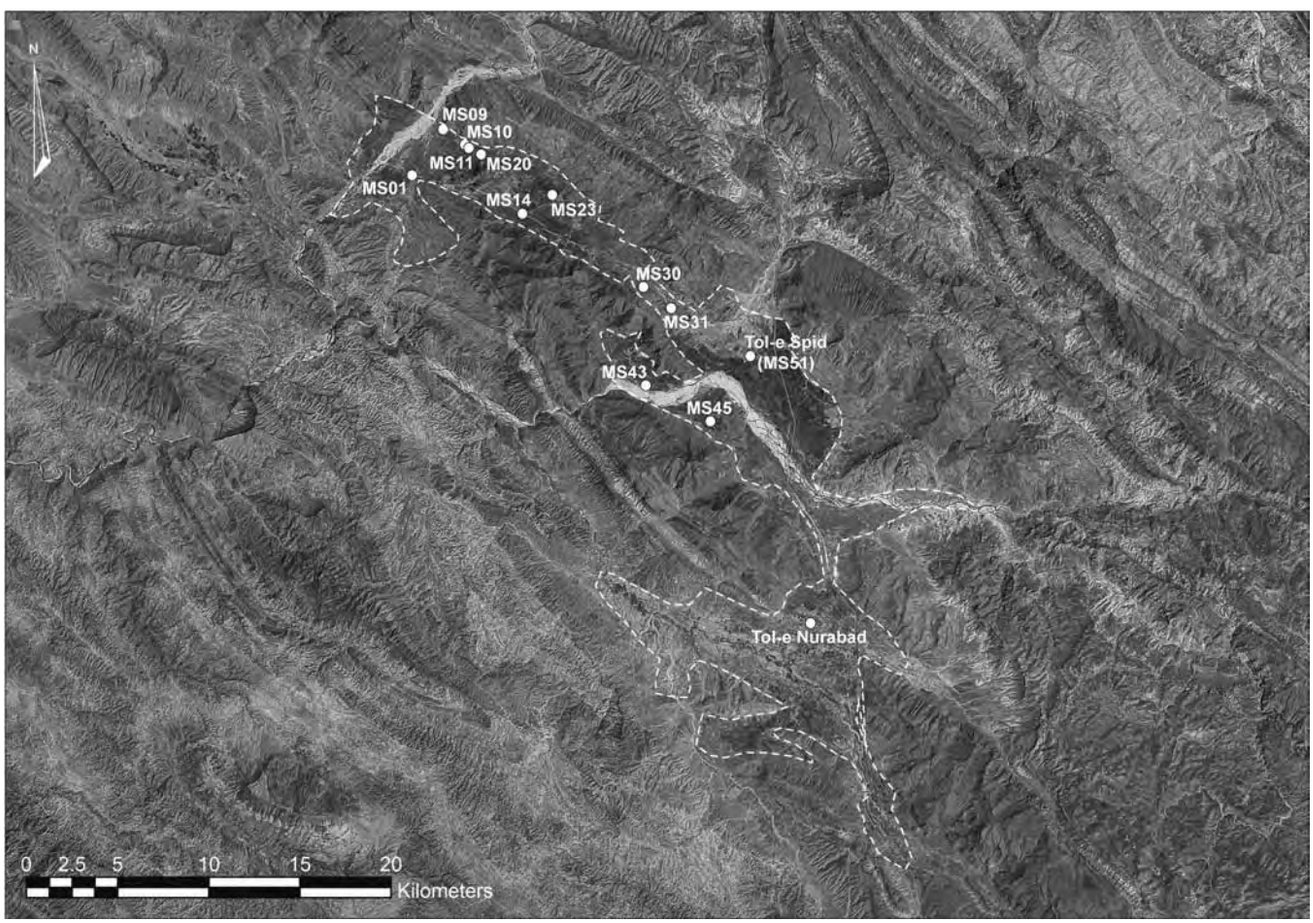


Figure 16.2. View of the plains of Mamasani (*top to bottom and left to right*): Dasht-e Rustam-e Do, Dasht-e Rustam-e Yek, Dasht-e Javid, and Dasht-e Nurabad. Sites with Bakun-period occupation are marked and labeled (Landsat 7 image)

oi.uchicago.edu

2006). Although preliminary, our fieldwork has produced some useful insights into the relative and absolute chronology of black-on-buff ceramics and prompts consideration of the nature of fifth-millennium B.C. communities in highland southwest Iran.

Archaeological Reconnaissance in Mamasani

A preliminary survey of the Mamasani district was carried out in February 2003 (Zeidi, McCall, and Khosrowzadeh 2006; McCall 2009), focusing upon the recording of settlement mounds, although a small number of additional sites, including several caves, were also visited. The reconnaissance concentrated upon three valleys: Dasht-e Rostam-e Yek, Dasht-e Rostam-e Do, and Dasht-e Javid. Several areas, including the Dasht-e Nurabad, have only been partially surveyed. A total of fifty-one sites were recorded during the survey, eleven of which yielded black-on-buff ceramics (fig. 16.2), with only four of these producing more than five sherds. The highest concentrations of black-on-buff material were observed at MS1 (1 ha), MS23 (0.65 ha), MS31 (1.5 ha), and MS43 (0.3 ha). The number of black-on-buff sherds recovered at most of these sites was limited, and it has generally been difficult to confirm reliable attributions for individual sub-periods. However, two significant observations can be made.

Firstly, the larger sites tend to show occupation in both the preceding (Neolithic) and/or the subsequent (Lapui) periods (Zeidi, McCall, and Khosrowzadeh 2006: table 6.1). In the Kur River Basin, when confronted with similar data, Sumner (1994) interpreted such sites as having been occupied throughout the Bakun period, although this does not take into account chronological variations in the type of material collected from the surface at each site. Many of the smaller Mamasani sites do not show such continuity, however. Sumner (1994) argues for occupation during only part of the Bakun period in equivalent cases in the Kur River Basin. Of course, it can be difficult to discern traces of all periods of past occupation on mounded settlement sites, as older layers are often completely buried beneath later deposits and provide few or no surface indicators of their presence (see Helwing and Seyedin this volume).

Secondly, based on the survey data, fifth-millennium B.C. occupation in Mamasani seems to have been sparse, at least in terms of mounded settlement sites, although there was a degree of growth in settlement numbers from the preceding Neolithic period (Zeidi, McCall, and Khosrowzadeh 2006: 150–53). Sites were generally small, about 1 ha or less, although two (MS31, MS51) might have been slightly larger. Of course, by its very nature, a survey directed primarily at mounded sites on the valley floor may have missed important sites located in other areas — particularly small, possibly seasonal sites on valley fringes and hill slopes. It will also miss sites that have been buried by alluvium. Given the debates about the role of mobile pastoralism in the Bakun period, the importance of such potential biases cannot be underestimated. It is perhaps significant that at least one of the three caves investigated during the survey produced black-on-buff sherds, while another produced lithics that are typologically similar to Bakun-period examples from the Kur River Basin.

Excavations at Tol-e Spid and Tol-e Nurabad

During two, six-week field seasons in February–March and June–July 2003, excavations were conducted at two deeply stratified mounded settlement sites in Mamasani. The aim of these initial excavations was to establish the periods of occupation at each site and to obtain a stratigraphically controlled ceramic sequence for the Mamasani district. To this end, deep excavated sequences were favored at each site in preference to exposures over broader areas. The first excavated site, Tol-e Spid, is the highest surviving mound in the Dasht-e Rostam-e Yek. Here, a 2 $\times$ 2 m sounding of more than 17 m in depth yielded a small number of black-on-buff sherds, most appearing out of context as residual material in layers dating from the early fourth millennium B.C. and later (Petrie, Asgari Chaverdi, and Seyedin 2006a; Petrie, Sardari Zarchi, and Javanmard Zadeh 2007). No intact Bakun-period deposits have yet been exposed during excavation at Tol-e Spid, and sterile deposits have yet to be reached (Petrie, Sardari Zarchi, and Javanmard Zadeh 2007), so the site is not discussed at length here. Nevertheless, the radiocarbon dates from the early Lapui phases at Tol-e Spid are significant for our understanding of the absolute date for the end of the Bakun period, and they are discussed below.

The second excavated site, Tol-e Nurabad, is located about 15 km to the south of Tol-e Spid in the neighboring Dasht-e Nurabad Valley. The mound survives to a height of 23 m above the surrounding plain and covers an area

oi.uchicago.edu

of approximately 9 ha. Two small (ca. 2 × 2 m) yet deep soundings, designated trenches A and B, were excavated. Trench A (fig. 16.3) was located on a deep cut through the northern part of the mound away from its highest point. Excavations here investigated the earliest deposits at the site, reaching virgin soil at a total depth of more than 15 m. Trench B was located nearby at the highest point of the mound, and it was excavated to a depth of more than 7 m before being halted. Together, the two trenches provide more than 22 m of archaeological deposits, with a span of material remains ranging from the pottery Neolithic (late seventh or early sixth millennium B.C.) to the post-Achaemenid period (late first millennium B.C.; Weeks et al. 2006b).

The deposits of trench A have been divided into discrete archaeological phases. The oldest material, of ceramic Neolithic date, comprises phases A27–A19 with a total depth of approximately 5 m. Immediately above phase A19 were a series of deposits (phases A18–A14) with a total depth of 3–4 m marked by the presence of characteristic black-on-buff ceramics that have relative parallels to the Bakun-period sites in the Kur River Basin. Above these layers in trench A were approximately 7 m of archaeological deposits that could be dated from the early fourth to the mid-second millennium B.C. The standing sections of trench A are shown in fig. 16.3, with the position of the phases characterized by black-on-buff ceramics (A18–A14) demarcated.

THE NATURE, QUALITY, AND DATING OF FIFTH-MILLENNIUM B.C. DEPOSITS AT TOL-E NURABAD

In many respects, the phases characterized by black-on-buff ceramics were the most problematic exposed in trench A at Tol-e Nurabad. Aside from phase A16, in which an agglomeration of small river cobbles and ash, which might be interpreted as a crude or eroded hearth, was found, phases A18–A14 generally lacked architectural remains. In general, the deposits were light brown and clay rich with ephemeral, slightly darker ashy lenses and rare thick

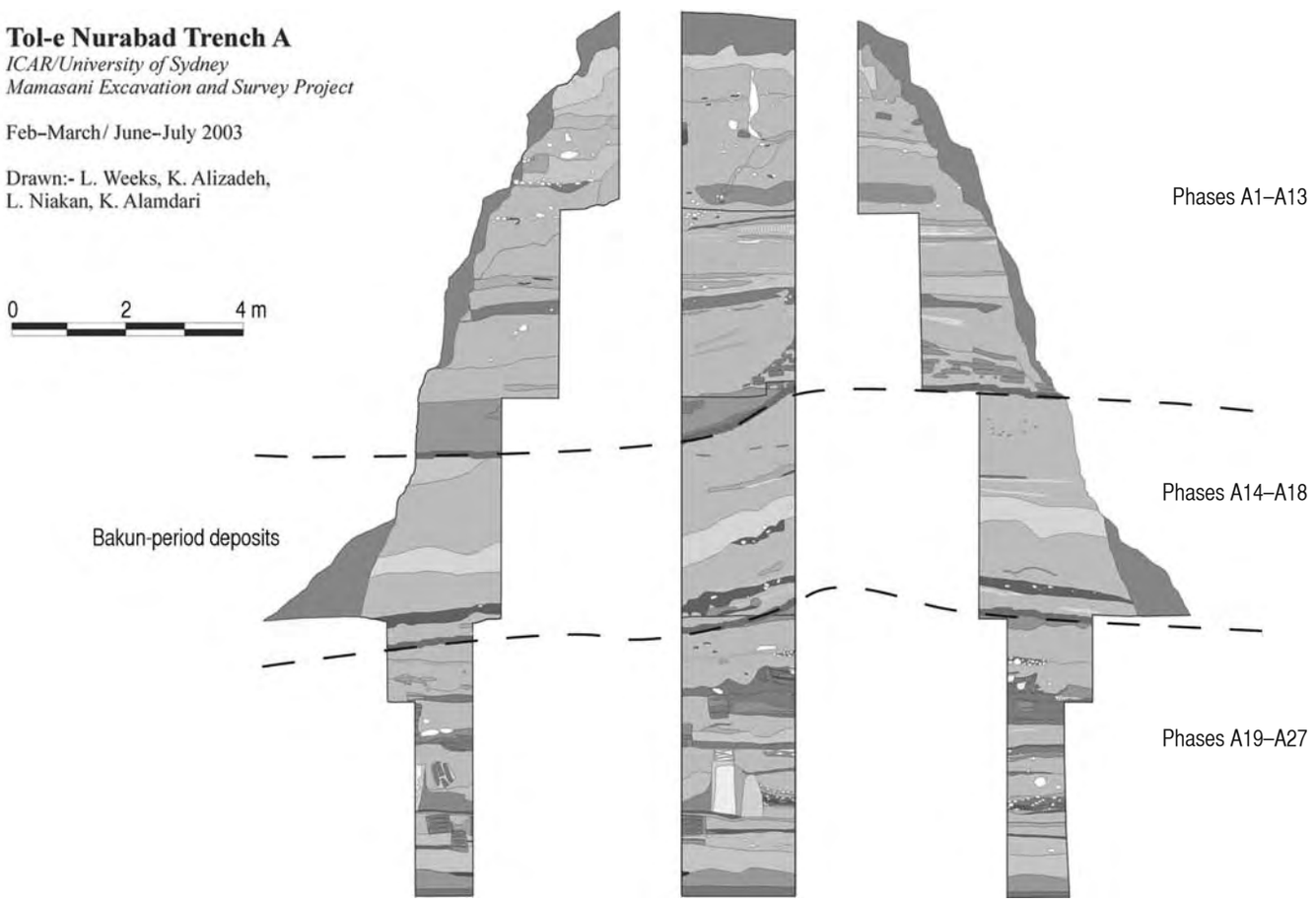


Figure 16.3. Stratigraphic section of Tol-e Nurabad trench A, with Bakun-period deposits marked (after Weeks et al. 2006a: pl. 5)

oi.uchicago.edu

bands of ash-rich deposit. All deposits showed a decided west–east slope and appear to have been washed down or reworked from their original deposition point higher up on a spur of the mound somewhere to the west-southwest. In contrast, the earlier deposits (phases A27–A19) were commonly characterized by the presence of mudbrick or *chineh* architectural remains and features such as elaborate hearths, and the deposits of phase A12 were characterized by well-preserved mudbrick architecture. Overall, the impression of the deposits characterized by black-on-buff ceramics in trench A is that the sampled area was in some way peripheral to the main area of settlement at the site in this period. Our speculation on the formation processes associated with these deposits also raises the possibility that material from different deposits and chronological horizons was mixed.

The complex formation processes of the deposits of phases A18–A14 are clearly reflected in the radiocarbon dates for these levels. One of the major aims of our research was to provide concrete absolute dates for our material through a comprehensive program of radiocarbon analyses of excavated samples. To this end, forty radiocarbon dates have been obtained on material from the trenches at Tol-e Nurabad (26 dates) and Tol-e Spid (14 dates). Considering the complex nature of deposit formation on deep, stratified sites such as Tol-e Nurabad and Tol-e Spid, the dates generally show good agreement with the relative stratigraphy and with expectations based upon absolute dates from neighboring sites and regions. Only one of the nine dates from the Neolithic deposits at Tol-e Nurabad is out of stratigraphic order, and none of the nine dates from phases A12b–A2b was out of stratigraphic sequence. In contrast, the eight radiocarbon dates from the non-architectural and strongly sloping (phases A18–A14) and immediately overlying deposits (phase A13) ranged in age from about 27,000 to 1500 B.C., and only two could be said to be in proper stratigraphic sequence or even vaguely in line with expectations based upon comparative assemblages and radiocarbon dates. The relevant radiocarbon dates from Tol-e Nurabad phases A19–A13 and Tol-e Spid phases 23–22 are shown in table 16.1.

Although the dates from deposits characterized by black-on-buff ceramics at Tol-e Nurabad are themselves highly problematic, the overall sequences of stratified radiocarbon dates from Tol-e Nurabad and Tol-e Spid provide reliable dates for the beginning and end of the use of black-on-buff ceramics in the Mamasani district. The dates from the later Neolithic deposits of phase A19 at Tol-e Nurabad are consistent in suggesting an age for these deposits of circa 4900–4700 B.C. The date from locus 113 is particularly interesting, as a small number (n = 7) of black-on-buff ceramic sherds were recorded in the upper layers (loci 111–114) of phase A19 amid a ceramic assemblage composed overwhelmingly of Neolithic chaff-tempered wares. It is difficult to ascertain whether Neolithic and black-on-buff wares were in fact being used contemporaneously at Tol-e Nurabad, as there is some possibility that the few black-on-buff sherds from Neolithic layers at the site are intrusive from upper levels. If the radiocarbon date of circa 4780–4490 cal. B.C. from phase A16 is reliable, then the replacement of the Nurabad Neolithic ceramic tradition by the black-on-buff tradition may have occurred relatively rapidly, whether or not the wares were ever used simultaneously.

A *terminus ante quem* for the end of the Bakun period in Fars is provided by a series of radiocarbon dates from the post-Bakun-period deposits at Tol-e Spid, in particular those from phase 23. The red wares that characterize these deposits have close parallels with Lapui ceramics excavated in the Kur River Basin at Tall-i Bakun A, where they were found in very disturbed deposits immediately above Bakun levels and define occupation in the "Lapui period." The radiocarbon dates from the earliest Lapui-period deposits at Tol-e Spid fall in the range of circa 3980–3710 cal. B.C. Significantly, these deposits do not show any evidence for the continuation of the Bakun black-on-buff ceramic tradition into the early fourth millennium B.C. at the site. Renewed excavations carried out at Tol-e Spid in early 2007 revealed a further 3 m of stratified Lapui-period occupation below phase 23 comprising an additional eight phases of occupation, which raises the possibility that the beginning of the Lapui period might in fact extend back into the late fifth millennium B.C. (Petrie, Sardari Zarchi, and Javanmard Zadeh 2007). Lapui ceramics have also been found stratified above Bakun black-on-buff ceramics at Tol-e Nurabad, although a number of indicators, including ceramic stylistic parallels with Tol-e Spid and radiocarbon dates, suggest that there is a gap in the Tol-e Nurabad trench A sequence between phases A14 (Bakun) and A13 (Late Lapui).

Of course, the radiocarbon dating evidence for the beginning (ca. 4800 B.C.) and end (ca. 4000 B.C.) of the Bakun period in Mamasani cannot be automatically assumed to apply to the Kur River Basin, let alone all the other sub-regions of Fars. However, the strong stylistic and typological parallels between Bakun material in Mamasani and the Kur River Basin suggest that the black-on-buff pottery traditions in these two regions are closely related and probably nearly contemporary in their developments. Such a conclusion is supported by an important series of new radiocarbon dates from the recent ICAR–Oriental Institute excavations in the Kur River Basin, which have been published by Alizadeh (2006: tables 9–11) together with some additional determinations on museum-curated

oi.uchicago.edu

Table 16.1. Radiocarbon dates from Tol-e Nurabad and Tol-e Spid

Lab. Code	*Site*	*Uncorrected Date B.P.*	*Calibrated Range (2σ [95.4%] range, years B.C.)*	*Locus*	*Phase*	*Period*	*Comments*
WK13994	Tol-e Nurabad	5850 ± 49	4840–4820 (.017) 4810–4580 (.915) 4570–4550 (.022)	117	A19	Late Neolithic	—
OZI129	Tol-e Nurabad	5910 ± 50	4940–4680 (.954)	113	A19	Late Neolithic	—
OZI130	Tol-e Nurabad	6290 ± 60	5470–5440 (.015) 5380–5190 (.794) 5180–5050 (.144)	109	A18	Early Bakun	Contaminated/ Residual?
WK13996	Tol-e Nurabad	5785 ± 51	4780–4740 (.050) 4730–4490 (.904)	103	A16	Bakun	—
OZI131	Tol-e Nurabad	4800 ± 60	3710–3490 (.845) 3440–3370 (.109)	96	A15	(Late) Bakun	Contaminated/ Intrusive
OZI653	Tol-e Nurabad	3340 ± 60	1770–1490 (.954)	95	A15	(Late) Bakun	Contaminated/ Intrusive
WK13997	Tol-e Nurabad	26999 ± 493	Beyond calibration range	89	A13	Late Lapui	Contaminated with bituminous material
OZI133	Tol-e Nurabad	5230 ± 80	4350–3800 (.954)	82	A13	Late(?) Lapui	Contaminated/ Intrusive
OZI652	Tol-e Nurabad	4030 ± 80	2900–2300 (.954)	81	A13	Late Lapui	Contaminated/ Intrusive
OZI654	Tol-e Nurabad	4790 ± 60	3700–3490 (.803) 3460–3370 (.151)	80	A13	Late Lapui	—
OZI134	Tol-e Nurabad	4750 ± 40	3640–3490 (.762) 3440–3370 (.192)	78	A12b	Late Lapui	—
OZI139	Tol-e Spid	5070 ± 60	3980–3710 (0.954)	3164	A23	Lapui	—
Wk 13980	Tol-e Spid	4981 ± 51	3940–3840 (0.210) 3820–3650 (0. 744)	3153	A22	Lapui	—

material. The dates generally show good agreement with those from Mamasani. In particular, calibrated radiocarbon dates on samples from levels preceding the use of black-on-buff ceramics (the Shamsabad or Bakun B1 period) at Tall-i Jari A and Tall-i Bakun B span the period circa 5360–4700 B.C. Such dates are in agreement with the early fifth-millennium B.C. dates from the final Neolithic or transitional Bakun deposits at Tol-e Nurabad in phase A19. A radiocarbon date from very early Bakun-period levels at Tall-i Bakun B (i.e., those characterized by black-on-buff ceramics) falls into the late sixth or very early fifth millennium B.C., and it is therefore somewhat incompatible with the latest Shamsabad-period dates from Tall-i Jari A and Tall-i Bakun B. Given the ranges of the calibrated dates, it seems feasible to propose a very early fifth-millennium B.C. date for the beginning of the Bakun period in the Kur River Basin. However, to push these dates back 200 years into the sixth millennium B.C. as proposed by Alizadeh (2006: 11) is more problematic (Weeks et al. 2006b).

Unfortunately, there are no reliable radiocarbon dates for the end of the Bakun period from the Kur River Basin directly comparable to the early Lapui-period dates from Mamasani mentioned above. Three dates from the lower levels of Tall-i Bakun A, which ceramic comparanda indicate belong to the Middle/Late Bakun transition (contra Alizadeh 2006: 46–47), consistently date to the period circa 4500–4250 B.C. These dates suggest that the end of the Bakun period in the Kur River Basin should be placed sometime in the last quarter of the fifth millennium B.C., and they in no way contradict the very early fourth-millennium B.C. dates obtained from the early Lapui deposits at Tol-e Spid.

oi.uchicago.edu

BLACK-ON-BUFF CERAMICS FROM MAMASANI

Black-on-buff pottery from excavations at Tol-e Nurabad is illustrated in figures 16.4–6, and pottery from the regional survey is illustrated in figure 16.7. The summary of the ceramic evidence from Tol-e Nurabad presented here is heavily abbreviated, and the reader is referred to Weeks and colleagues (2006a) for a full description and documentation of this material.

Shapes

The overall typological variation of the black-on-buff vessels at Tol-e Nurabad is relatively limited, and only a small number of vessel forms are present. Phase A18 produced one complete profile (fig. 16.4: TNP 1304), representing a small bowl or cup with an upright rim and a ring base. More helpfully, three nearly complete vessels were recovered from phase A16 (fig. 16.5): a cup with a simple vertical rim and flat base (TNP 1115), a small bowl or beaker with a simple everted rim and slightly rounded base (TNP 1121), and a carinated bowl with an upright simple rim (base not preserved — TNP 1101).

The most common shape in the earlier phases (A18–A17) is the simple "shallow" bowl (i.e., bowl with height < diameter) with diameters varying from around 9 to 27 cm. Variants of the simple bowl include both plain and painted "deep" bowls (i.e., bowls with height > diameter; fig. 16.5: TNP 1195, 1200), and bowls with incurving rims. Ring-bases are the most common base form (fig. 16.4: TNP 1304, 1325, 1338, 1339, 1340, 1341), although flat or slightly concave bases and slightly rounded bases were also recorded. The most unusual shape is represented by TNP 1336 (fig. 16.4), which is a perforated sherd from a vessel of uncertain form.

There is a change in assemblage composition from phases A18–A17 to phases A16–A15. Shallow bowls become less frequent, and deep bowls emerge as the most frequently occurring open shape. These bowls generally possess a slightly everted rim and a small flat base and are usually undecorated (fig. 16.5: TNP 1011, 1026, 1029, 1046, 1056, 1059, 1072, 1073, 1106). Deep plain bowls are not found in unmixed phase A14 contexts or in subsequent phases, and it is possible that they were no longer produced and used by this phase at Tol-e Nurabad. Shallower painted bowls with everted rims continue to be used into the latest black-on-buff phases, and this rim form appears to continue being used in the Lapui period (Petrie, Asgari Chaverdi, and Seyedin 2006a; also Sumner 1988). The common open forms from Tol-e Nurabad were also found abundantly at fifth-millennium B.C. sites during the survey of Mamasani. Simple bowls and ring bases were particularly common, and sherds, possibly from deep plain bowls, were also recorded (fig. 16.7: MSP 20).

Alongside the predominant open forms are found a number of closed forms. Small carinated vessels (fig. 16.4: TNP 1308, 1309) are rare and only found early in the black-on-buff ceramic sequence from the site. However, large, thick-walled, closed forms suited to storage are more common and are present from phase A18 through phase A15 and possibly A14. These take the form of large globular vessels (fig. 16.6: TNP 1140, 1330, 1332, 1333, 1335, 1337), usually with everted neck (fig. 16.6: TNP 1086, 1088, 1334, 1342) and flat or slightly rounded bases (fig. 16.6: TNP 1346, 1351, 1395). Similar storage vessel forms were recorded during the survey of the region (fig. 16.7: MSP 3, 25, 957), although storage vessel forms not recovered from excavation were also seen (fig. 16.7: MSP 1597, 1601).

Wares

There is limited variation in the ceramic paste used to produce the black-on-buff vessels recovered from Tol-e Nurabad and the regional survey. Paste color varies from the predominant buff (Munsell equivalent 5Y 8/1 to 8/2, 2.5Y 8/1 to 8/2) to greenish buff (Gley Chart 1 8/5GY to 8/5G) and light brown (2.5Y 7/2 to 7/4, 2.5Y 6/2 to 6/4), with rare orange (2.5YR 6/8 and 7/8) or gray (5Y 5/1, Gley Chart 2 6/5B to 6/5PB) examples. The variations in paste color probably reflect minor differences in kiln atmosphere and firing temperature, with greenish buff sherds in particular resulting from overfiring. Pilot petrographic analyses of black-on-buff ceramic samples from Tol-e Nurabad and several other sites in Mamasani have shown that most vessels were produced from calcareous clay containing small grains of calcite and quartz (Petrie et al. in prep.). Vegetal inclusions are very rare. Larger, thick-walled storage vessels tend to be made from a distinct orange paste, sometimes with a buff slip. Vessels are handmade, although many show evidence for the use of a slow wheel or tournette for elements of the manufacturing process (fig. 16.6: TNP 1171, 1342). Vessels are generally well fired, hard, and non-friable. Surface texture is commonly fine to medium but varies in relation to vessel size, inclusions, and decoration: sandy wares tend to have

oi.uchicago.edu

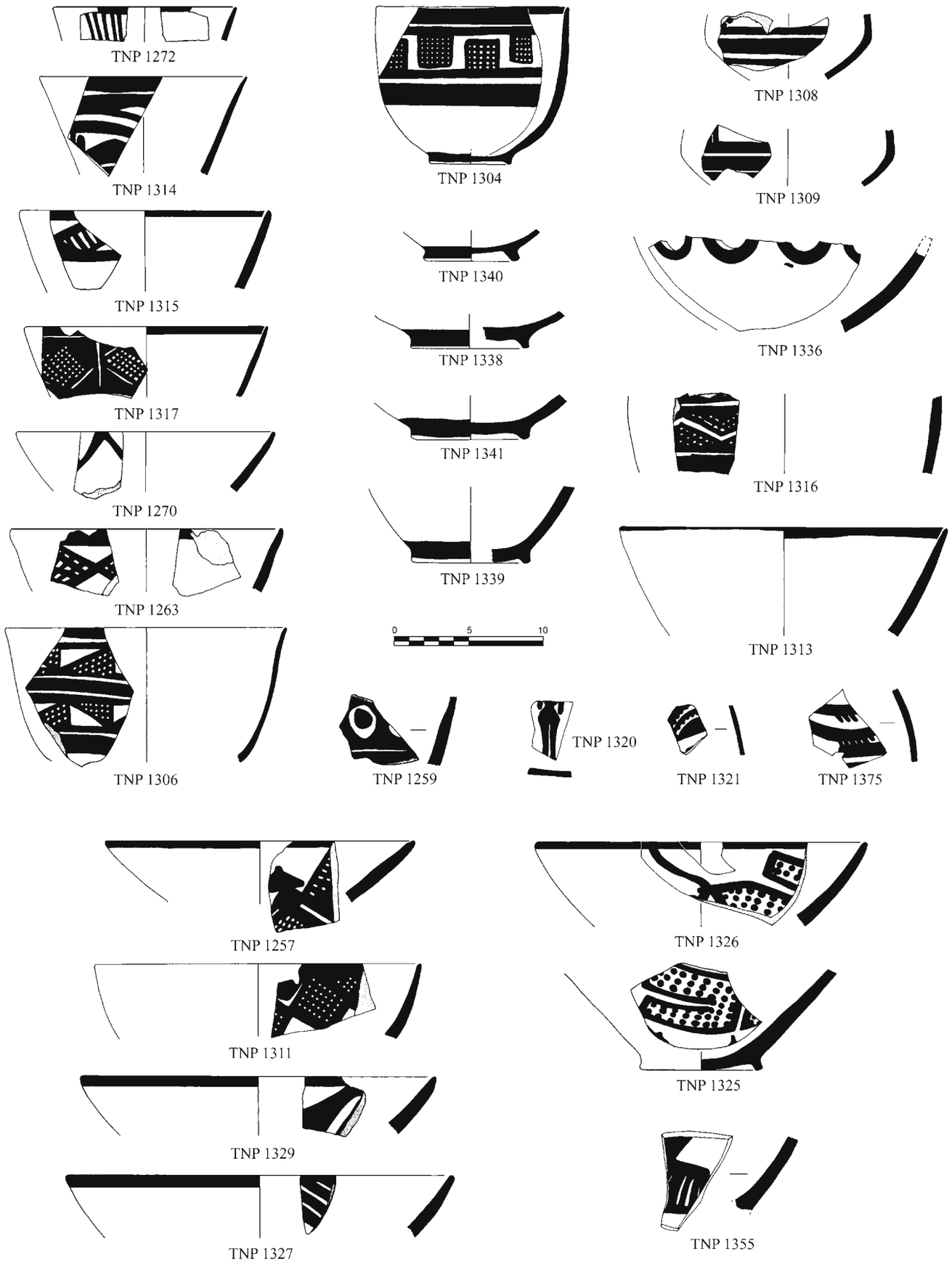


Figure 16.4. Bakun-related ceramics from Tol-e Nurabad phases A18–A14 (after Weeks et al. 2006a: figs 3.82–3.97)

oi.uchicago.edu

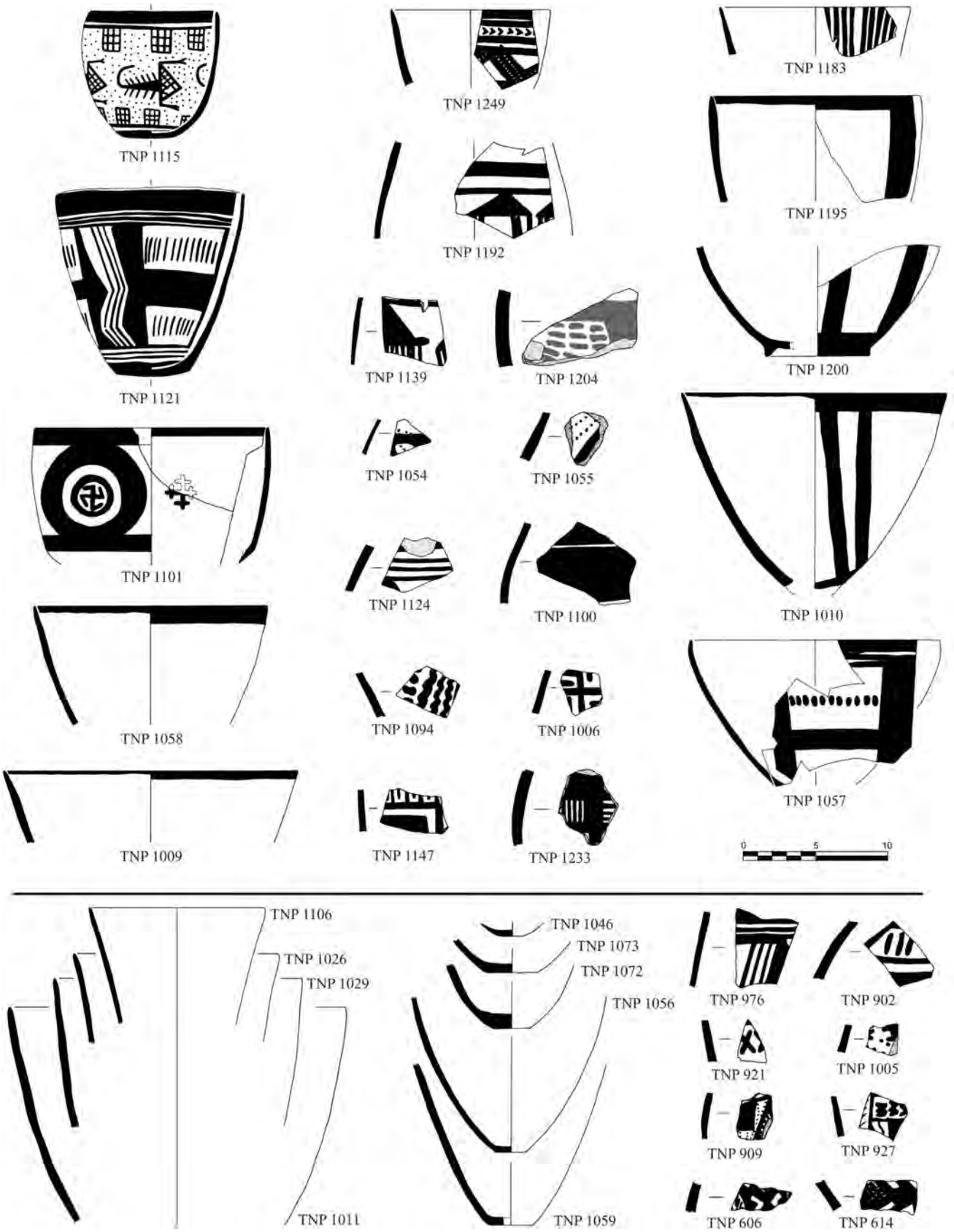


Figure 16.5. Bakun-related ceramics from Tol-e Nurabad phases A18–A14 (after Weeks et al. 2006a: figs 3.82–3.97)

oi.uchicago.edu

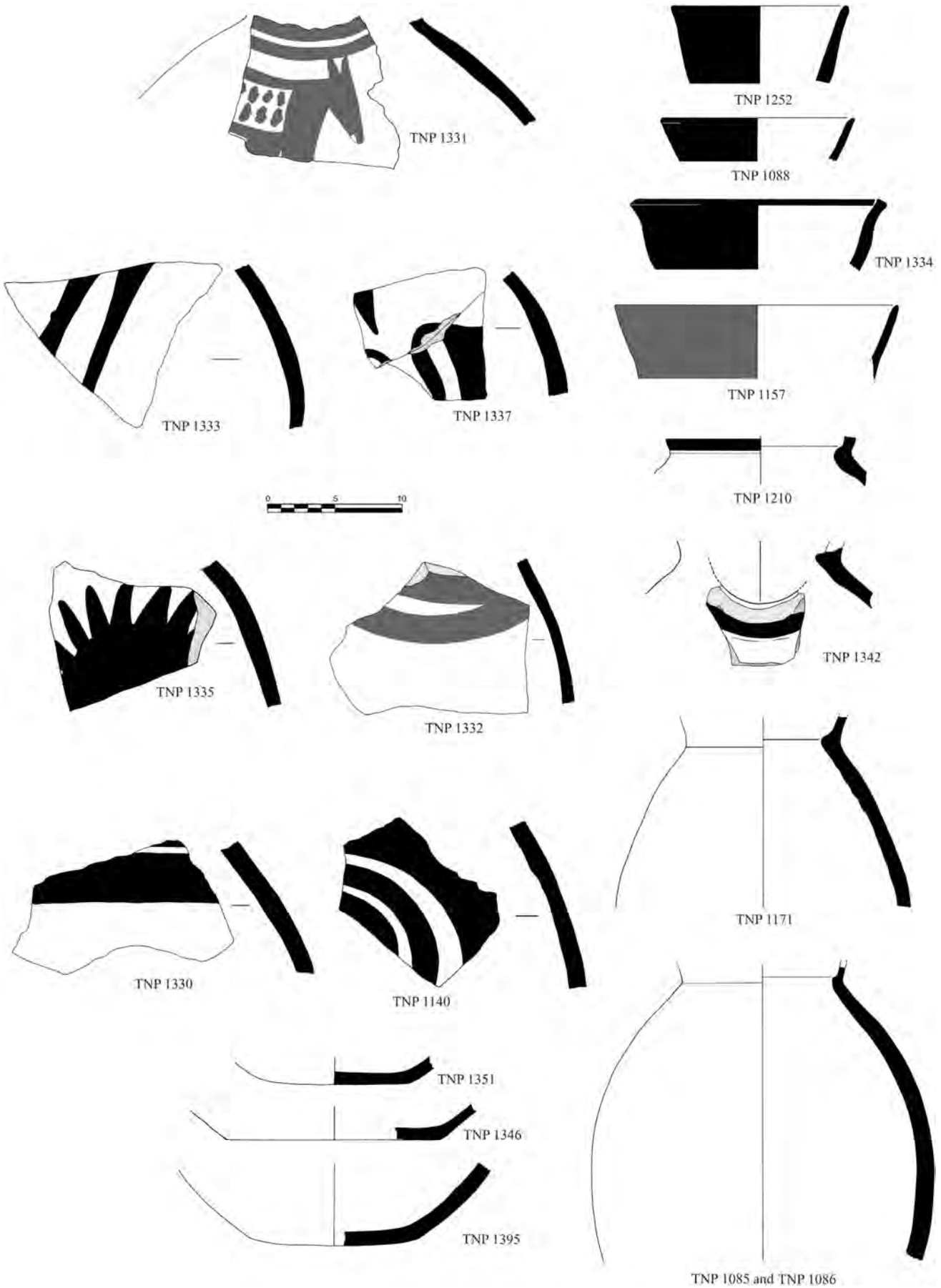


Figure 16.6. Bakun-related ceramics from Tol-e Nurabad phases A18–A14 (after Weeks et al. 2006a: figs 3.82–3.97)

oi.uchicago.edu

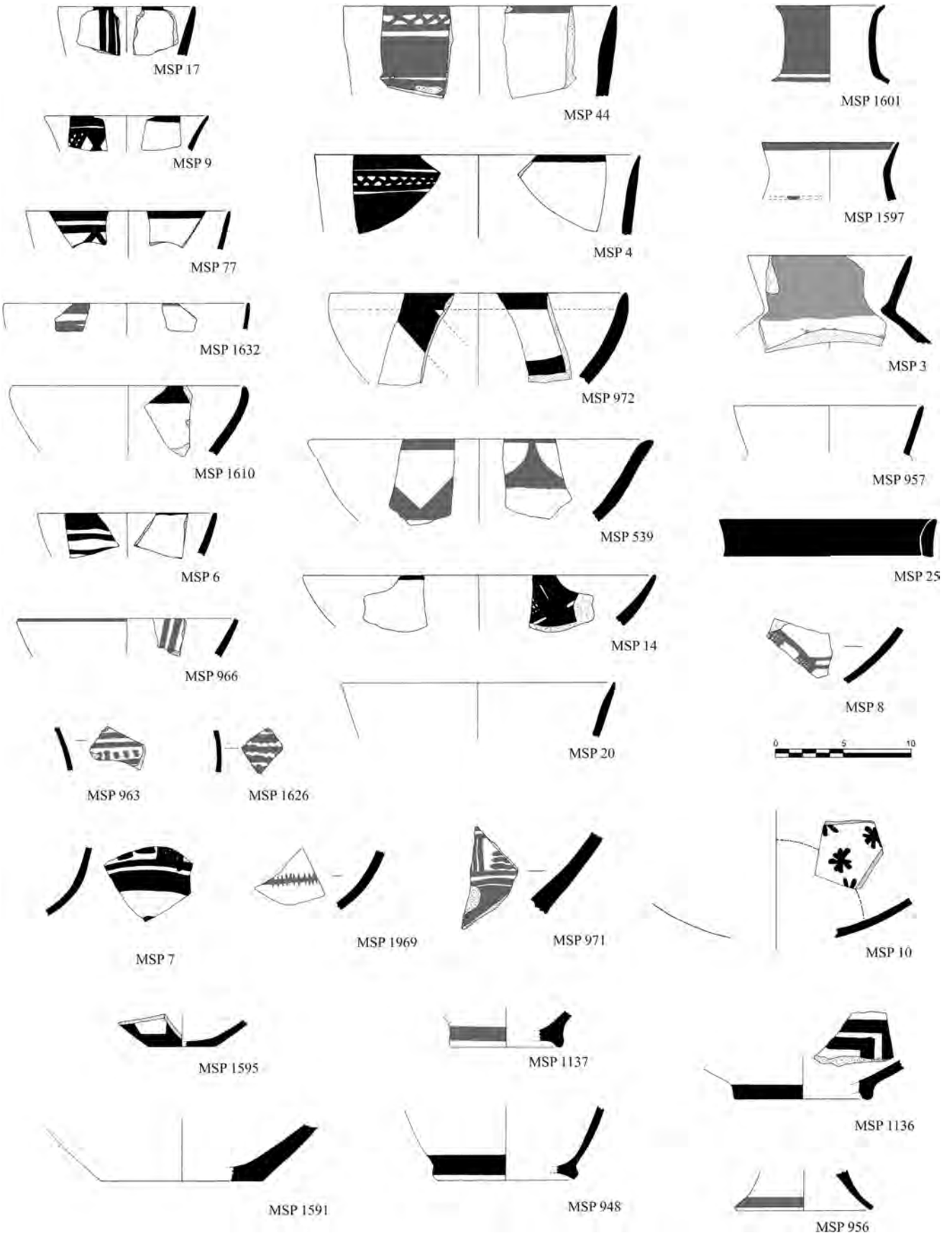


Figure 16.7. Bakun-related ceramics from the Mamasani survey (after Zeidi, McCall, and Khosrowzadeh 2006: figs 6.7–6.9)

oi.uchicago.edu

a finer finish than vessels with lime grit inclusions, painted vessels tend to have a finer surface finish than plain deep bowls, and larger closed forms generally have a coarser finish than bowls.

Decoration

The great majority of registered black-on-buff sherds from Tol-e Nurabad and the regional survey have painted decoration, usually in a dark brown paint (10YR 3/3 to 3/6, 10YR 4/3 to 4/6), although the color can vary from brown (10YR 5/3 to 5/8) through to greenish brown, purplish brown, and black. Most are painted on the exterior only, although bowls with the main decorated area on the interior represent a significant minority in the earliest black-on-buff assemblages of phase A18 (fig. 16.4: TNP 1257, 1311, 1325, 1326, 1327, 1329, 1355). The simplest form of decoration is a band of paint at the rim of the vessel on both interior and exterior surfaces, a decorative scheme found throughout the Tol-e Nurabad black-on-buff ceramic sequence (fig. 16.5: TNP 1009, 1058; fig. 16.4: TNP 1313). However, elaborate and predominantly geometric decoration is more common, with an emphasis upon horizontal lines and bands (fig. 16.5: TNP 902, 976, 1124, 1192, 1249), usually framing hatched (fig. 16.4: TNP 1315, 1355) or crosshatched shapes (fig. 16.4: TNP 1249, 1263, 1304, 1306, 1311, 1316, 1317). Dense, cross-hatched, geometric motifs are more prevalent in the earlier Bakun-period levels from the site, particularly phase A18. In contrast, vertical lines (fig. 16.4: TNP 1272, 1309) occur infrequently in phase A18, but become more common in later phases where they are particularly associated with deep bowls (fig. 16.5: TNP 1010, 1057, 1183, 1195, 1200). The use of dots in linear arrays or to fill unpainted fields is also relatively common in the later black-on-buff deposits from Tol-e Nurabad (fig. 16.5: TNP 909, 1005, 1054, 1055). Uncommon or rare geometric motifs include the triangle with pendant lines (phases A16–A14; fig. 16.5: TNP 1139, 1192), the "mat-weave" pattern (fig. 16.5: TNP 1233), the swastika and variants (fig. 16.5: TNP 1101, 1006), bands with opposed interlocking short lines (fig. 16.5: TNP 1147), wavy lines (fig. 16.5: TNP 1094), "sigma" signs (fig. 16.5: TNP 927), and simple crosses (fig. 16.5: TNP 921). The motifs found on sherds from the regional survey do not greatly expand the range of the excavated Tol-e Nurabad assemblages, although a motif of zigzag lines below the vessel rim and above thick painted bands (fig. 16.7: MSP 4, 44), common at the site of Tappeh Sorna (MS01), is not recorded in trench A at Tol-e Nurabad.

Non-geometric decorative motifs are relatively rare but include humans (fig. 16.4: TNP 1320), animals (fig. 16.5: TNP 1115, 1204; fig. 16.4: TNP 1259, 1314, 1321, 1325, 1326, 1375), and other figures depicted in a stylized or abstracted manner. Some of the best examples come from storage vessels (fig. 16.6), including the animal depictions on TNP 1331 and 1337, the rayed "sun" shape on TNP 1335, and the spiral (snake?) pattern on TNP 1140. However, the decoration on the body of storage vessels most commonly consists of simple broad bands (fig. 16.6: TNP 1330, 1332, 1333), and the entire neck area is often painted (fig. 16.6: TNP 1088, 1157, 1210, 1252, 1334, 1342).

General Stylistic Parallels

The black-on-buff wares recovered from the excavations and survey in Mamasani are most clearly and consistently comparable to pottery from the Kur River Basin, that is, the excavated Early Bakun sites of Tall-i Bakun B level B2 (Egami and Masuda 1962; Alizadeh 2006) and Tall-i Jari A1 (Egami, Masuda, and Gotch 1977) and later variants from Tall-i Gap (Egami and Sono 1962), Tall-i Bakun A levels I–IV (Egami and Masuda 1962; Langsdorff and McCown 1942), and Tall-i Nokhodi (Goff 1963, 1964). Two of the three complete vessels from phase A16 have typological parallels useful in determining their relative chronology and for outlining regional similarities. The small deep bowl (TNP 1121), in particular, can be paralleled in the upper levels of Tall-i Gap (period IIb) and in level III at Tall-i Bakun A, suggesting strong links with the Kur River Basin and a date in the later part of the Middle Bakun period. Good parallels can also be found at Middle Bakun Tepe Rahmatabad (S. Pollock, pers. comm.) near the Tang-e Bolaghi, and well to the northwest of Mamasani in the Ram Hormuz Plain at Tall-i Ghazir (Caldwell 1968). The use of small dots to fill the empty field of the cup (TNP 1115), although seen as early as Tall-i Bakun B2, is a motif typical of Tall-i Gap levels 2–6 (period IIb–IIc) and is also seen at Tall-i Bakun A (Alizadeh 2006).

The clearest stylistic parallels to the Kur River Basin ceramics fall predominantly in the earlier black-on-buff levels at Tol-e Nurabad, and the elaborate decoration seen in the later phases at Tall-i Bakun A (levels III–IV) and Tall-i Nokhodi is not frequently recorded in Mamasani. However, a number of residual Bakun-period sherds from higher up in the trench A sequence (fig. 16.5: TNP 606, 614, phase A9) have decoration more comparable with

oi.uchicago.edu

Tall-i Bakun A ceramics, and their presence is testament to the likely occupation of Tol-e Nurabad during the Late Bakun period and to continuing contacts with the Kur River Basin throughout the fifth millennium B.C.

Farther afield, the buff-ware deep bowls predominant in Tol-e Nurabad phases A16–A15, both plain and decorated, are common in Susiana during the Middle Susiana period (ca. 5200–4700 B.C.; Dollfus 1971, 1975, 1978a, 1978b, 1983a, 1983b, 1983c), and in Deh Luran during the Bayat and Farukh phases (ca. 5000–4300 B.C.) (Hole, Flannery, and Neely 1969: 124–32, fig. 48g, h, p–s; Wright 1981: 23–26, figs. 13 and 14). Such parallels suggest that during the later fifth millennium B.C., connections between Mamasani and regions to its northwest might have been stronger than those with the Kur River Basin, although this is only a general trend and there is no clear transition from one "sphere of influence" to another. In fact, general parallels with the Susiana sequence can be found throughout the Tol-e Nurabad excavated assemblage, as can parallels with the fifth-millennium ceramics from the intervening Behbehan-Zureh region (e.g., TNP 1306, 1317 from phase A18; TNP 1101 from phase A16; see Dittmann 1984: figs. 1.18, 19.2, 23.12). What is difficult to qualify at this stage, however, is the connection between the Mamasani black-on-buff ceramic material and that from other regions of Fars, which have been the subject of less intensive investigation, such as Sarvistan, Fasa, Darab, Bushehr, and Lamerd, or with the neighboring provinces to the north such as Kohgiluyeh va Boyrahmad and Charmahal va Bakhtiari.

Finally, regarding ceramic production and distribution, although kilns or other primary evidence of ceramic production have not yet been discovered in Mamasani, fragments of black-on-buff vessel wasters were found as residual material at Tol-e Spid, suggesting that ceramic firing was taking place at the site (Petrie, Sardari Zarchi, and Javanmard Zadeh 2007). It is unclear what this might signify in terms of the organization of ceramic production and distribution in the region, other than that local manufacturing did indeed take place, potentially at Tol-e Spid. Pilot elemental (ICP-AES) analyses have been undertaken on black-on-buff ware samples collected from Tol-e Nurabad, Tappeh Sorna (MS01), and Tol-e Kohne Zirdu (MS43), and they broadly cluster along a calcium and sodium axis, reflecting their high calcium content. There is no clear separation of the samples from the different sites into elementally distinct groups, reflecting a broad homogeneity in the composition of the clays used during this period. There are a number of possible explanations for this, including the possibility that all the black-on-buff ceramic material was being produced in one center, or that the calcareous clays of Mamasani have similar chemical compositions. However, little more can be said until further excavations and broader analytical programs are carried out (Petrie et al. in prep.).

NON-CERAMIC EVIDENCE

Aside from the ceramic remains, the deposits characterized by black-on-buff ceramics at Tol-e Nurabad produced a very limited array of small finds, including a meager chipped-stone assemblage consisting of fewer than twenty pieces including blades, blade fragments, and debitage. However, a series of soil samples was collected during excavation, and a substantial assemblage of faunal remains was also recovered. These have not yet been analyzed, so no discussion is possible regarding the plant species exploited at the site in the fifth millennium B.C. The faunal remains, however, indicate a broad similarity with the preceding Neolithic levels at Tol-e Nurabad and with Bakun-period sites in the Kur River Basin, with domestic sheep and goat continuing to dominate the assemblage (by number of identified specimens [NISP]), although a minor increase in the proportion of domestic cattle was seen (Mashkour 2006). The deposits of phase A15 also contained a vertebral disk of a whale (Mashkour 2006: 137), which must have been brought from the Persian Gulf.

DISCUSSION

Fieldwork in Mamasani has provided important new evidence for the absolute chronology of the fifth millennium B.C., and the distribution of black-on-buff ceramic material in Fars. However, it has also highlighted several areas where further work is necessary: absolute chronologies for the Bakun-period and neighboring cultural assemblages are still being established (with consequent implications for our understanding of chronological trajectories of change), regional variations in ceramic assemblages have not been adequately investigated, and aspects of continuity and change remain to be satisfactorily addressed. Moreover, the Bakun period continues to be a focus for

oi.uchicago.edu

academic debates regarding developments in subsistence economies and socioeconomic complexity that took place during the fifth millennium B.C., particularly the development of nomadic pastoralism and its role in the development of potentially proto-state organization (Alizadeh 2003, 2006). These issues relate to our understanding of Bakun-period communities and their interaction with contemporary societies, and some are addressed below.

Absolute Chronologies and Directions of Influence

It is clear from recent programs of radiocarbon dating that the beginnings of the black-on-buff ceramic tradition in highland Fars are significantly later than in lowland southwestern Iran and Mesopotamia. This conclusion is supported by stylistic parallels between the black-on-buff ceramics of Fars and Susiana, which suggest that most highland black-on-buff ceramics are best paralleled in the Middle and Late Susiana periods, not in the Early Susiana black-on-buff tradition (Alizadeh 2005, 2006: 11, 67, 97; Voigt and Dyson 1992).

One possible conclusion to be drawn from the new chronological evidence is that the origins of the black-on-buff Bakun ceramic tradition lie in the lowlands, whence some degree of stylistic and technological influence spread to the highlands of Fars in the early fifth millennium B.C. However, other possibilities can certainly be entertained based on the very limited available evidence. For example, these influences could have come not directly from the lowlands but from any of the immediately neighboring regions that exhibited a black-on-buff tradition, such as the Bakhtiari highlands, the Behbehan-Zureh region, or the coastal lowlands of Bushehr province. If chronological primacy is regarded as an important characteristic in determining origins and geographical trajectories for the spread of black-on-buff ceramic traditions, then our lack of secure absolute dates for most parts of the Zagros represents a significant stumbling block. Moreover, there are still large parts of the Zagros and piedmont that remain archaeologically unknown. We therefore have little idea whether Bakun-period interaction was a product of exchange, migration, contact between sedentary farmers and mobile pastoralists, or something else.

At the other end of the Bakun period, the latest dates from Tall-i Bakun A and the earliest dates from Tol-e Spid suggest that its ending in Fars was contemporary with or slightly earlier than the end of the black-on-buff tradition in lowland Susiana, as represented by the Susa A/Susa I deposits and associated black-on-buff and red ware ceramic traditions (Alizadeh 2005: 172). It is potentially significant that the end of the black-on-buff ceramic style is coeval, or nearly so, across such a wide geographical region. This is further evidence for some degree of cultural connection among the regions characterized by the black-on-buff ceramic horizon.

Continuity and Change at the Neolithic–Bakun Interface

The appearance of Bakun-period ceramics in the Kur River Basin has previously been interpreted as a result of the migration to the region of foreign groups or specialized potters (Alizadeh 2006: 11, 67, 97). Such arguments are based upon the great difference in ceramic styles between the Late Neolithic and the Early Bakun periods. However, while black-on-buff ceramics are indeed new in a stylistic and technological sense, there are many indicators of a degree of cultural continuity between the Neolithic and Bakun periods in highland Fars. These indicators do not contradict Alizadeh's hypothesis of migration, but help to set boundaries on the scale, nature, and extent of any population movements into and within the region. For example, although many new settlements were founded in the Bakun period, there appears to have been a substantial degree of settlement continuity, as measured by the fact that up to 108 Late Neolithic settlements continued to be occupied in the Bakun period (Sumner 1990: 99). There is additional evidence for Neolithic–Bakun continuity from architectural techniques and subsistence practices, both of which show strong similarities across this material/chronological boundary, as briefly outlined above.

Continuities extend to the ceramic assemblages themselves. Although Bakun black-on-buff ceramics largely replace pottery of the existing late Neolithic tradition (a regional manifestation of the "Neolithic soft-ware horizon," referred to locally as Shamsabad or Bakun B1 pottery), it is notable that a tradition of chaff-tempered pottery continues alongside Bakun black-on-buff painted ceramics at a number of sites. For example, the relatively coarse vegetal-tempered wares that characterize the pre-Bakun levels at Tall-i Bakun B and Tall-i Jari A continue into the Bakun period proper, forming a small but significant proportion of the ceramic assemblages at these sites (Alizadeh 2006: 68–69; Voigt and Dyson 1992: vol. 1, 137; Dyson 1965; see also Bernbeck, Fahimi, and Janmaleki 2010).

oi.uchicago.edu

The speed of the transition between ceramic styles may be critical to the assessment of cultural continuity, but this is open to question. At Tall-i Jari A there is a supposed sterile layer between Late Neolithic (Shamsabad) and Early Bakun-period deposits, making it impossible to trace any development there. At Tall-i Bakun B, recent excavations by Alizadeh (2006: 199) have produced evidence of a similar stratigraphic hiatus between the Shamsabad and Bakun-period occupations at the site, whereas the Japanese excavations were not so clear-cut in this respect. They reported a "layer of blue clay" at the base of the Bakun-period deposits that contained "only a few artefacts" and appeared "to be a deposit in the space between Levels I and II" (Egami and Masuda 1962: 5, fig. 4). This layer produced one painted black-on-buff sherd mixed with a small assemblage of plain chaff-tempered wares of Shamsabad type (Egami and Masuda 1962: 5), which is a sample size that is too small to be definitive. The use of black-on-buff ceramics side-by-side with Neolithic chaff-tempered wares in the upper deposits of phase A19 at Tol-e Nurabad is questionable, due to the very small exposures at the site and the non-primary contexts from which the sherds were recovered.

There is therefore an absence of excavated sites that conclusively reflect the transition from the Neolithic/Shamsabad to the Bakun period. Nonetheless, the recent Oriental Institute-ICAR excavations in the Kur River Basin may have produced significant evidence of further ceramic links between the Shamsabad and Bakun periods. Alizadeh (2004: 6) has reported that in the Shamsabad levels at Tall-i Jari A, "almost all of the finer pieces are plain, but toward the end of the sequence, simple vertical or horizontal bands painted in dark appear on some examples," and that the later Shamsabad wares from the site sometimes have a white slip. It could be argued that such developments represent the rise of artistic and technological traditions leading to the production of Bakun black-on-buff painted wares, possibly through contact with or inspiration from contemporary black-on-buff-ceramic using groups in neighboring regions.

Explaining the Adoption and Spread of Black-on-Buff Pottery within Fars

Several mechanisms might explain the origins and spread of black-on-buff ceramic traditions across prehistoric Fars. These can be broken down into a basic dichotomy: those in which *goods* move, and those in which *people* (and their skills, knowledge, and values) move. It is almost certain that both kinds of mechanisms were operating in fifth-millennium B.C. highland southwest Iran, and that both played a role in the spread of black-on-buff pottery traditions across this region.

If we begin with a consideration of the movement of goods, we must examine the evidence for ceramic production, distribution, and exchange. The Bakun ceramic vessels themselves indicate that Bakun potters possessed a high degree of skill and were able to produce slow-turned, hand-formed vessels of incredible fineness, often literally covered with decorative motifs of striking complexity and beauty. The quality of decoration and the fact that the fast wheel was not being used suggest that a significant amount of time must have been expended on producing and painting individual vessels. Thus, it seems likely that these vessels were produced by specialist potters (Sumner 1994: 59). Further evidence in support of this claim is provided by a study of the archaeological distribution of specific painted pottery motifs and black-on-buff pottery production facilities and debris in Fars province. It is clear from both archaeological fieldwork and the regional variability of painted motifs on Bakun pottery (Alizadeh 2006: 67) that pottery production was undertaken at many, but not all, sites in highland southwest Iran. The best evidence of Bakun-period ceramic production comes from Late Bakun levels at Tall-i Bakun A (period III), where kilns, production debris, and massive ash deposits were discovered across a substantial portion of the site (Langsdorff and McCown 1942: 6, 70–71; Alizadeh 1988b, 2006). To this we can now add the evidence for ceramic production at Middle Bakun Tappeh Rahmatabad, which includes the possible use of small round turntables and kilns within a settled area (Bernbeck, Fazeli, and Pollock 2005: 102–03); the Middle Bakun-period kilns exposed at DB91 and DB131, and the Late Bakun-period kiln at DB73 in the Darre-ye Bolaghi (Helwing and Seyedin 2006, 2007, this volume); and the pottery wasters recovered from BH56 near Bushehr (Carter et al. 2006: 78) and Tol-e Spid (Petrie, Sardari Zarchi, and Javanmard Zadeh 2007). In addition, there are thirteen other sites in the Kur River Basin that have revealed surface finds indicative of ceramic production activities (Sumner 1994: 59).

The evidence from the Kur River Basin and the Darre-ye Bolaghi raises the possibility that there were specialized Bakun-period ceramic production sites where a significant component of overall productive activity was directed toward the manufacture of pottery for exchange. Although the material remains from Tall-i Bakun A suggest a considerable investment in ceramic production activities, and relatively intensive production, it is still unclear

oi.uchicago.edu

whether the potters at Tall-i Bakun A were responsible for producing pottery for other sites. Judging from the excavated remains, the consumption of pottery at Tall-i Bakun A was considerable and could feasibly have accounted for all the ceramics that were fired at the site itself. Nevertheless, the absence of evidence for ceramic production at the majority of Bakun sites suggests that, while pottery manufacture may have been widespread, it was apparently not universally undertaken (Sumner 1994: 59).

Given that ceramic production appears to have been specialized and localized, yet all Bakun-period sites are characterized by abundant black-on-buff ceramics, we must at least envisage local exchanges of pottery taking place within parts of the Kur River Basin and other relatively small and self-contained regions such as the Mamasani district. This means that exchange, whether an economic or a social transaction, must have played a role in the regional distribution of black-on-buff pottery. However, the possible importance of long-distance ceramic exchange is more difficult to assess. While it is clear that some items moved very long distances in fifth-millennium B.C. Fars — copper from southeast Iran or the central plateau, obsidian from eastern Anatolia, and cowrie shells from the Persian Gulf are known from Bakun-period contexts in the Kur River Basin, while whale bone from the Persian Gulf reached Tol-e Nurabad (Alizadeh 2006: 81, figs. 67–70; Egami and Masuda 1962: 6; Mashkour 2006: 137) — it is not at all clear that black-on-buff ceramics should be included on such a list. Nor is it clear whether the long-distance movement of goods involved anything other than a sequence of more geographically restricted exchange transactions. It would be possible to gain some insight into local patterns of ceramic distribution through a systematic stylistic and compositional analysis of material from sites in the Kur River Basin (contra Alizadeh 2006: 67), but this has not yet been attempted. In fact, ceramic production in prehistoric Fars has only been investigated in a preliminary fashion for some periods (e.g., Alden 1979; Sumner 1994: 59–60), and very few scientific studies have been undertaken (e.g., Blackman 1981, 1989; Zeder and Blackman 2003).

Turning to the movement of people — individuals and groups — as a mechanism for the dispersal of black-on-buff ceramic traditions, there are a number of specific social and economic (subsistence) practices that have been discussed in relation to prehistoric Fars. We have already noted the suggestion by Alizadeh (2006: 11) that black-on-buff ceramics represent a migration into the Kur River Basin, at least of specialized potters if not of a wider spectrum of individuals or groups. If this idea is extrapolated more broadly, then each of the regional manifestations of the black-on-buff ceramic tradition in Fars could be seen as a result of such migration. However, little archaeological evidence is yet available to support a specific source region for any of these putative migrations (Alizadeh 2006: 11).

One possible mechanism for the movement of potters and thus the transfer of pottery technology over at least short distances relates to exogamous marriage relationships between neighboring or more distant villages (Forest 1989; Alizadeh 2006: 23, 26). Recent studies of the Bell Beaker phenomenon in Europe have combined analyses of ceramics with isotopic studies of human skeletal remains to suggest that knowledge transfers may have resulted from generalized exchange relationships involving the movement of marriage partners (Vander Linden 2007; see also Price et al. 2004). Although there is a relative dearth of evidence from burials in Fars that might be analyzed using such techniques, such practices are very likely to have occurred in the prehistoric past in the region and may well account for some of the shared traditions of ceramic production that characterize various sub-regions of highland southwest Iran in the fifth millennium B.C. However, the role of intermarriage in technology transfer on a broader geographical scale, and within a phenomenon that seems to incorporate a clear geographical directionality, is more difficult to disentangle from other processes. As with the discussion of ceramic production and exchange above, it is difficult to determine how essentially short-distance movements and exchange transactions could have generated such a broad geographical spread of black-on-buff pottery traditions.

Given the uncertainty over such matters, it is perhaps not surprising that the development of seasonal transhumance and possibly long-distance nomadic pastoralism in fifth-millennium B.C. highland Iran has been given a prominent explanatory role in the wide distribution of Bakun black-on-buff pottery by at least some scholars. As outlined above, Alizadeh (1988b, 1994, 2003: 88–90, 2006) has argued that the transition to fully nomadic pastoralism took place during the Bakun period (see also Abdi 2003), and that Tall-i Bakun A provides evidence for the existence of complex pre-state formations based on mobile pastoralism (as opposed to subsistence agriculture) in highland Iran during the fifth millennium B.C. In addition to drawing upon evidence for seasonal camp sites in the Bakun period and the presence of administrative technology at Tall-i Bakun A (see above), a major component of Alizadeh's argument revolves around the similar geographic distributions of Bakun-related black-on-buff pottery in southwest Iran and the historically and ethnographically documented migratory routes of the Qashqa'i nomads, whose seasonal migrations cover almost the entire length and breadth of modern-day Fars province (Alizadeh 2003:

oi.uchicago.edu

89–90, 2006: fig. 5b; also Beck 2003). M. A. Stein's (1937) discovery of the apparently Late Bakun-period site at Tall-i Pir in the Lamerd district (see also Asgari Chaverdi 2001; Asgari Chaverdi et al. 2008) fits such a model and has been used circumstantially to imply that Bakun populations engaged in mobile pastoralism between the *garmsir* and *sardsir* climate zones in central and southern Fars (e.g., Alizadeh 2003: fig. 7.1, 2006: fig. 5b). The putative rise of mobile pastoral groups in the fifth millennium thus provides an ideal (if theoretical) set of cultural agents for the transmission of technical and other cultural knowledge over very long distances in prehistoric Fars. Alizadeh (2006: 11, 97) also recognizes in such mobile groups a means of accounting for the origins of the Fars black-on-buff ceramic traditions, stating that "one possible explanation for the appearance of the Susiana-related ceramics in Fars may be based on a presumed sedentarization of the Zagros region mobile pastoralist groups."

There are a number of problems with such a reconstruction. Although some of the Bakun-period mounds and possible camp sites may have been occupied seasonally (Alizadeh 2003: 88–90; also M. A. Stein 1936: 161, 163, 175, 180), the only "camp site" that has yet been excavated turned out to be a kiln site (Helwing and Seyedin this volume). As such, it is not clear what role these camp sites played in the Bakun-period subsistence regime or even if they were camps at all. Furthermore, the existence of such sites in no way precludes the exploitation of agricultural subsistence strategies, nor does it indicate the wholesale adoption of mobile pastoralism, but may in fact represent the use of both approaches simultaneously (e.g., Abdi 2003). While camp sites remain elusive, what is clear is that the large number of mounded sites with Bakun-style ceramics provides direct evidence of sedentary occupation on a large scale in fifth-millennium Fars. Furthermore, although Alizadeh (2006: 22ff.) argues strongly for the role of nomadic pastoralists in explaining the distribution of Bakun material, the ethnographic and comparative evidence that he cites suggests that if they use pottery at all, nomads typically use simple, crude vessels with a limited range of shapes. Finally, although it is tempting to see the similarity between the distribution of Bakun black-on-buff painted ceramic material and the regions exploited by the Qashqa'i as evidence for the use of similar subsistence regimes, it must be emphasized that these two examples are separated by over 5,000 years, so any suggestion that similar practices were in operation must be considered speculative at best (Potts 2008).

These criticisms should by no means be taken as a rejection of the idea that mobility and pastoralism played an important part in exchange relations and cultural transmission in the fifth millennium B.C. On the contrary, a degree of mobility has been regarded as characterizing even the preceding Neolithic subsistence practices in both highland and lowland Iran (Hole 1998, 2004; Bernbeck 1992, 2001: 8–10; Pires-Ferreira 1977). However, given the limitations of the available archaeological evidence, we believe that it is premature to attribute the widespread adoption and use of black-on-buff ceramics in prehistoric Fars, let alone any contemporary developments in social complexity, solely or predominantly to the influence of nomadic pastoralists.

CONCEPTUALIZING SHARED CERAMIC TRADITIONS

If black-on-buff pottery is the only category of material that links together *all* putative Ubaid-related societies across southwest Asia, then we are faced with a clear question: Is the distribution of one category of material within otherwise highly varied material assemblages an indicator of broad-scale cultural interactions? As noted by Carter and Philip in a summary document circulated after the Durham conference,

> We must also acknowledge the perspective that the Ubaid had no reality in the past, but is no more than a classificatory device which reflects patterning of one or two elements of material culture upon which 20th century scholars were particularly fixated.

However, it is our feeling that if indications of cultural contact are indeed limited to this one material category, then the distribution of the black-on-buff ceramic horizon takes on an even greater significance. In a response to the document circulated by Carter and Philip, Frank Hole noted that "While regions may share … 'an Ubaidness,' it is like saying that regions today share 'a Cokeness.'" Hole was discussing the regional differences that appeared to him to characterize Ubaid-related assemblages across southwest Asia, but to us this appears a striking and potentially useful analogy. Could not a future archaeologist glimpse the dramatic political and economic transformations of the twentieth century through an analysis of the distribution of the Coke bottle? This simple beverage container remains an icon of the ideology of capitalist free enterprise and a material embodiment of its spread. Ceramic vessels, like glass bottles, are in and of themselves static objects that have been produced, transported, used, and discarded. It is only an understanding of the cultural values that structured these behaviors that can provide insight into the signifi-

oi.uchicago.edu

cance of such material remains, and by extension the significance of specific black-on-buff pottery traditions and the black-on-buff ceramic horizon that they define.

It is now generally acknowledged that material culture plays an active role in the construction and reproduction of social relations and behavior (Hodder 1982a, 1982b). That is, we make our own material world, and we are in turn made by it. One potentially fruitful approach may be to try to understand the ideas and beliefs (conscious or otherwise) represented by the Bakun and other black-on-buff ceramics by adopting the theoretical perspective of material engagement and materialization (e.g., DeMarrais, Gosden, and Renfrew 2004; DeMarrais 2004; Renfrew 2004). Often used to explore changing ideas, beliefs, and concepts at key thresholds in human development (e.g., Renfrew 2004), such an approach has potential for trying to understand societies undergoing the shift to more complex social systems more or less simultaneously over widespread areas. Gosden (2004: 38–39), for example, has suggested that synchronous changes in the decorative styles of Lapita pottery across a wide area may reflect a relationship among pots, the human body, and particular activities such as tattooing, producing what he describes as a "dense set of linkages between people and things laden with aesthetic values." Similarly, we are interested in comprehending the concepts and beliefs behind black-on-buff decoration, how these might have been shared across a society or societies, and what they might signify in terms of social, ideological, or symbolic behavior.

A number of significant trends become apparent if we look at the nature of the black-on-buff ceramic decoration itself. With relatively few exceptions, the Neolithic ceramics of both Fars and Susiana are decorated with geometric and/or simple organic motifs. However, during the Bakun period and its lowland counterpart, there is a progressive increase in the frequency of anthropomorphic and zoomorphic motifs. This culminates in two of the most celebrated expressions of figural decoration on ceramic vessels in Iran: the Late Bakun-period pottery from Tall-i Bakun A and the Susa A/I pottery from burials in the massif funéraire at Susa. The elaborate motifs depicted on these contemporary highland and lowland ceramic vessels are similar yet clearly distinctive, and they are not paralleled elsewhere in Iran. This suggests that something quite distinct was happening at these sites, and potentially during the late fifth millennium B.C. as a whole. Although these motifs represent an increased elaboration of the decorative possibilities available when using one color of pigment, at present we have only a relatively simplistic idea of the types of ideas and beliefs that might be materialized in these vessels. For example, it has been proposed that some designs from the black-on-buff repertoire in highland southwest Iran represent dancing individuals and groups (Garfinkel 2005), which can be seen as part of the wider significance of such rituals for maintaining social cohesion in later prehistoric western Asia (Garfinkel 2003). While not necessarily endorsing this particular interpretation of some of the Bakun-period motifs, it nevertheless highlights the fact that the evidence for social process embedded in the black-on-buff ceramic assemblages may be the key to understanding their significance and distribution.

It is clear that interpretation cannot be separated from the measurement and quantification of stylistic variability within and between ceramic assemblages. One way forward in this regard would be a structured examination of the known excavated and surveyed black-on-buff ceramic material from Fars to determine what types of internal homogeneity and variety exist in terms of approaches to production, vessel form, and especially ceramic decoration. This needs to be contextualized through a close focus on the original archaeological contexts of the material from well-excavated sites like Tall-i Bakun A, in order to establish the relationships between specific vessels and particular social contexts. Only when we can understand the degree of homogeneity and/or variability within specific black-on-buff ceramic assemblages, and how this relates to different contexts within houses and villages, will it be possible to establish what these vessels meant in social and economic terms. A systematic effort to undertake such studies on all the ceramic traditions that fall under the black-on-buff heading might well advance our understanding of the roles and functions fulfilled by pottery in those societies, and help us to discover any structural relationships that existed among them. Henricksen's (1989) analysis of black-on-buff pottery from Mesopotamia and the central western Zagros is a good example of how such research might be effectively undertaken.

FOR THE FUTURE

In his review of *Upon this Foundation: The 'Ubaid Reconsidered*, Kohl (1992: 372) pointed out that even in this groundbreaking volume, "ceramics, architecture, and burial data are the archaeological materials most frequently analysed; little ecofactal data is presented. No paper attempts a reconstruction of the basic subsistence practices of various Ubaid and Ubaid-related cultures; the data are either not available or were not collected in a way to allow for

oi.uchicago.edu

systematic comparison." In many ways, this situation has not changed, particularly in our understanding of the fifth millennium B.C. in highland Iran, and perhaps also for our comprehension of lowland Iran and Mesopotamia. We do not have a clear idea of the distribution and organization of settlement during the Early, Middle, and Late Bakun phases; neither do we have a clear impression of the subsistence regimes that were in use during the fifth millennium B.C. derived from the analysis of floral and faunal remains; and perhaps most critically, we have little idea of what was transpiring at the largest Bakun-period sites in the Kur River Basin at this time.

These lacunae in our knowledge highlight a clear way forward for the resolution of several outstanding issues in our understanding of this critical time period in Iran and Mesopotamia. In order to gain an understanding of Bakun-period social and economic development, it is vital that broad new research programs are undertaken in order to resolve a number of basic questions:

1) the existing Bakun-period survey data must be re-evaluated in order to attribute individual sites to specific phases within the period (cf. Sumner 1994: 63), and to establish whether the current interpretations of Bakun-period settlement dynamics can be maintained;
2) new excavations must be carried out at sites that have Early, Middle, and/or Late Bakun phases of occupation, and also at Lapui and Early Banesh sites that have a significant depth of deposit, with the specific aim of obtaining sequences of radiometric dates and botanical and faunal remains to provide evidence for the type of subsistence regimes being practiced; and
3) there must be excavation of putative "camp sites" to establish how the behavior of the inhabitants of such sites related to the inhabitants of more substantial sites.

While in many ways it is most critical that such research is undertaken at sites in the Kur River Basin, further excavations at both Tol-e Nurabad and Tol-e Spid will undoubtedly contribute to new perspectives on the fifth millennium B.C. It is highly likely that environmental factors played a critical role in the location and timing of any shift to nomadic pastoralism. Mamasani lies in the temperate *motadel* zone and for millennia has been an important region on the major route between the low and highland plains. As such it will provide critical perspectives on the history of pastoralism in the intermontane valleys of Fars, and particularly on the distribution of decorative motifs into the interstitial regions between the lowlands and highlands.

But where is the Ubaid in this discussion? Only when such research questions are addressed for the Bakun period in highland Fars will it be possible to systematically and coherently investigate shared elements of the black-on-buff pottery traditions of Iran and Mesopotamia, and to isolate any fundamental links between the people who produced and used these ceramics.

BIBLIOGRAPHY

Abdi, Kamyar
2003 "The Early Development of Pastoralism in the Central Zagros Mountains." *Journal of World Prehistory* 17: 395–448.

Abdi, Kamyar; Susan Pollock; and Reinhard Bernbeck
2003 "Fars Archaeology Project 2003: Excavations at Toll-e Bashi." *Iran* 41: 339–44.

Akkermans, Peter M. M. G., and Glenn M. Schwartz
2003 *The Archaeology of Syria: From Complex Hunter-gatherers to Early Urban Societies (ca. 16,000–300 B.C.)*. Cambridge: Cambridge University Press.

Alden, J. R.
1979 Regional Economic Organisation in Banesh Period Iran. Ph.D. dissertation, University of Michigan.

Algaze, Guillermo
2005 *The Uruk World System: The Dynamics of Expansion of Early Mesopotamian Civilisation*. 2nd edition. Chicago: University of Chicago Press.

oi.uchicago.edu

Alizadeh, Abbas

1988a Mobile Pastoralism and the Development of Complex Societies in Highland Iran: The Evidence from Tall-i Bakun A. Ph.D. dissertation, University of Chicago.

1988b "Socio-economic Complexity in Southwestern Iran during the Fifth and Fourth Millennium B.C.: The Evidence from Tall-i Bakun A." *Iran* 26: 17–34.

1992 *Prehistoric Settlement Patterns and Cultures in Susiana, Southwestern Iran: The Analysis of the F. G. L. Gremliza Survey Collection*. Museum of Anthropology, Technical Reports 24. Ann Arbor: University of Michigan.

1994 "Social and Economic Complexity and Administrative Technology in a Late Prehistoric Context." In *Archives before Writing* (Proceedings of the International Colloquium, Oriolo Romano, October 23–25, 1991), edited by P. Ferioli, E. Fiandra, G. G. Fissore, and M. Frangipane, pp. 35–58. Pubblicazioni del Centro Internazionale di Ricerche Archeologiche, Antropologiche e Storiche 1. Turin: Scriptorium.

2003 "Some Observations Based on the Nomadic Character of Fars Prehistoric Cultural Development." In *Yeki Bud, Yeki Nabud: Essays on the Archaeology of Iran in Honor of William M. Sumner*, edited by N. F. Miller and K. Abdi, pp. 83–97. Los Angeles: Cotsen Institute of Archaeology, University of California.

2004 "Recent Archaeological Investigations on the Persepolis Plain." *The Oriental Institute News & Notes* 183: 1–7.

2005 "Chogha Mish." In *Persias Ancient Splendour (Persiens antike Pracht): Mining, Handicraft and Archaeology*, edited by T. Stöllner, R. Slotta, and A. Vatandoust, pp. 166–77. Bochum: Deutsches Bergbau-Museum.

2006 *The Origins of State Organizations in Prehistoric Highland Fars, Southern Iran: Excavations at Tall-e Bakun*. Oriental Institute Publications 128. Chicago: The Oriental Institute.

Asgari Chaverdi, A.

2001 Archaeological Survey in the Hinterland of Persian Gulf. M.A. thesis, University of Tehran.

Asgari Chaverdi, A.; A. Khosrowzadeh; B. McCall; Cameron A. Petrie; Mojgan Seyedin; Lloyd R. Weeks; and M. Zeidi

2010 "Archaeological Evidence for Achaemenid Settlement within the Mamasani Valleys, Western Fars, Iran." In *The World of Achaemenid Persia,* Conference Proceedings, edited by J. Curtis and S. J. Simpson, pp. 287–97. London: Iran Heritage Foundation.

Asgari Chaverdi, A.; Cameron A. Petrie; and H. Taylor

2008 "Early Village Settlements on the Persian Gulf Littoral: Revisiting Tol-e Pir and the Galehdār Valley. *Iran* 46: 21–42.

Beale, T. W.

1986 *Excavations at Tepe Yahya, Iran 1967–1976: The Early Periods*. American School of Prehistoric Research Bulletin 38. Cambridge: Peabody Museum of Archaeology and Ethnology.

Beck, L.

2003 "Qashqa'i Nomadic Pastoralists and Their Use of Land." In *Yeki Bud, Yeki Nabud: Essays on the Archaeology of Iran in Honor of William M. Sumner*, edited by N. F. Miller and K. Abdi, pp. 289–304. Los Angeles: Cotsen Institute of Archaeology, University of California.

Beech, M., and J. Elders

1999 "An 'Ubaid-related Settlement on Dalma Island, Abu Dhabi Emirate, United Arab Emirates." *Bulletin of the Society of Arabian Studies* 4: 17–21.

Berman, Judith C.

1987 "Ceramic Production and Its Implications for the Sociopolitical Organisation of the Susa I Phase, Susiana." *Paléorient* 13.2: 47–60.

1989 "Ceramic Production and Its Implications for the Sociopolitical Organization of the Susiana Plain during the 'Ubaid." In *Upon this Foundation*: *The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 257–80. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

oi.uchicago.edu

Bernbeck, Reinhard

1992 "Migratory Patterns in Early Nomadism: A Reconsideration of Tepe Tula'i." *Paléorient* 18: 77–88.

2001 "Forschungperspektiven für das Iranische Neolithikum." *Archäologische Mitteilungen aus Iran und Turan* 33: 1–18.

Bernbeck, Reinhard; Susan Pollock; and Kamyar Abdi

2004 "Reconsidering the Neolithic at Toll-e Bashi (Iran)." *Near Eastern Archaeology* 66: 76–78.

Bernbeck, Reinhard; H. Fahimi; and N. Janmaleki

2010 "The Bakun Pottery." In *The 2003 Excavations at Tol-e Baši, Iran: Social Life in a Neolithic Village,* edited by S. Pollock, R. Bernbeck, and K. Abdi, pp. 152–62. Archäologie in Iran und Turan 10. Mainz: Philipp von Zabern.

Bernbeck, Reinhard; H. Fazeli; and Susan Pollock

2005 "Life in a Fifth-Millennium BCE Village: Excavations at Rahmatabad, Iran." *Near Eastern Archaeology* 68: 94–105.

Blackman, M. J.

1981 "The Mineralogical and Chemical Analysis of Banesh Period Ceramics from Tal-i Malyan, Iran." In *Scientific Studies of Ancient Ceramics*, edited by M. J. Hughes, pp. 7–20. British Museum Occasional Studies 19. London: British Museum.

1989 "Ceramic Technology and Problems of Social Evolution in Southwest Iran." In *Materials Issues in Art and Archaeology* (Symposium Held April 6–8, Reno, Nevada, U.S.A.), edited by E. V. Sayre, P. Vandiver, J. Druzik, and C. Stevenson, pp. 103–08. Materials Research Society Symposium Proceedings 123. Pittsburgh: Materials Research Society.

Caldwell, Joseph R.

1968 "Ghazir, Tell-i." *Reallexikon der Assyriologie*: 348–55.

Carter, R. A.; K. Challis; S. M. N. Priestman; and H. Tofighian

2006 "The Bushehr Hinterland: Results of the First Season of the Iranian-British Archaeological Survey of Bushehr Province, November–December 2004." *Iran* 44: 63–103.

Delougaz, Pinhas, and Helene J. Kantor; edited by Abbas Alizadeh

1996 *Chogha Mish*, Volume 1: *The First Five Seasons of Excavations 1961–1971*. Oriental Institute Publications 101. Chicago: The Oriental Institute.

DeMarrais, E.

2004 "The Materialisation of Culture." In *Rethinking Materiality: The Engagement of Mind with the Material World*, edited by E. DeMarrais, C. Gosden, and C. Renfrew, pp. 11–22. Cambridge: McDonald Institute Monographs.

DeMarrais, E.; C. Gosden; and Colin Renfrew, editors

2004 *Rethinking Materiality: The Engagement of Mind with the Material World*. Cambridge: McDonald Institute Monographs.

Dittmann, R.

1984 *Eine Randebene des Zagros in der Frühzeit: Ergebnisse des Bahbahan-Zuhreh Surveys*. Berliner Beiträge zum Vorderen Orient 3. Berlin: Dietrich Riemer.

1986 *Betrachtungen zur Frühzeit des Südwest-Iran: Regionale Entwicklungen vom 6. bis zum frühen 3. vorchristlichen Jahrtausend*. Berliner Beiträge zum Vorderen Orient 4. Berlin: Dietrich Riemer.

Dollfus, Genevieve

1971 "Les fouilles à Djaffarabad de 1969 à 1971." *Cahiers de la Délégation archéologique française en Iran* 1: 17–81.

1975 "Les fouilles à Djaffarabad de 1972 à 1974: Djaffarabad, périodes I et II." *Cahiers de la Délégation archéologique française en Iran* 5: 11–189.

1978a "Bendebal." *Iran* 16: 186–89.

1978b "Djaffarabad, Djowi, Bendebal: Contribution à l'étude de la Susiane au V^{e} millénaire et au début du IV^{e} millénaire." *Paléorient* 4: 141–67.

oi.uchicago.edu

1983a "Djowi et Bendebal: Deux villages de la plaine centrale du Khuzistan (Iran)." *Cahiers de la Délégation archéologie française en Iran* 13: 17–275.

1983b "Tepe Bendebal." *Cahiers de la Délégation archéologique française en Iran* 13: 133–275.

1983c "Tepe Djowi." *Cahiers de la Délégation archéologique française en Iran* 13: 17–119.

Dyson, R. H.

1965 "Problems in the Relative Chronology of Iran, 6000–2000 B.C." In *Chronologies in Old World Archaeology*, edited by R. Ehrich, pp. 215–65. Chicago: University of Chicago Press.

Egami, Namio, and S. Masuda

1962 *Marv-Dasht*, Volume 1: *The Excavation at Tal-i-Bakun 1956*. Tokyo University Iraq-Iran Archaeological Expedition Reports 2. Tokyo: Institute of Oriental Culture of the University of Tokyo.

Egami, Namio; S. Masuda; and T. Gotoh

1977 "Tal-i Jarri A: A Preliminary Report of the Excavations in Marv Dasht, 1961 and 1971." *Orient* 8: 1–14.

Egami, Namio, and T. Sono

1962 *Marv-Dasht*, Volume 2: *The Excavation at Tall-i-Gap 1959*. Tokyo University Iraq-Iran Archaeological Expedition Reports 3. Tokyo: Institute of Oriental Culture of the University of Tokyo.

Forest, Jean-Daniel

1989 "Les 'jetons' non Urukiens et l'échange des femmes." In *Upon this Foundation*: *The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 199–226. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Fraser, J. A.

2008 "An Alternate View of Complexity at Tall-e Bakun A." *Iran* 45: 1–19.

Garfinkel, Y.

2000 "The Khazineh Painted Style of Western Iran." *Iran* 38: 57–70.

2003 *Dancing at the Dawn of Agriculture*. Austin: University of Texas Press.

2005 "Dancing Diamonds." *Iran 4*3: 117–33.

Goff, Claire L.

1963 "Excavations at Tall-i Nokhodi." *Iran* 1: 43–70.

1964 "Excavations at Tall-i Nokhodi, 1962." *Iran* 2: 41–52.

1971 "Lūristān Before the Iron Age." *Iran* 9: 131–52.

Gosden, C.

2004 "Aesthetics, Intelligence and Emotions: Implications for Archaeology." In *Rethinking Materiality: The Engagement of Mind with the Material World*, edited by E. DeMarrais, C. Gosden, and C. Renfrew, pp. 33–40. Cambridge: McDonald Institute Monographs.

Haerinck, E., and B. Overlaet

1996 *The Chalcolithic Period, Parchinah and Hakalan: Belgian Archaeological Mission in Iran: The Excavations in Luristan, Pusht-i Kuh (1965–1979)*. Luristan Excavation Documents 1. Brussels: Royal Museums of Art and History.

Hall, Henry R., and C. Leonard Woolley

1927 *Al-'Ubaid: A Report on the Work Carried Out at Al-'Ubaid for the British Museum in 1919 and for the Joint Expedition in 1922–3*. London: Oxford University Press.

Helwing, Barbara

2005 "Long-distance Relations of the Iranian Highland Sites during the Late Chalcolithic Period: New Evidence from the Joint Iranian-German Excavations at Arisman, Prov. Isfahan, Iran." In *South Asian Archaeology 2003*, edited by U. Franke-Vogt, pp. 171–78. Aachen: Linden Soft.

Helwing, Barbara, and Mojgan Seyedin

2006 "Symposium on the Archaeological Rescue Excavations in the Bolaghi Valley." In *Prehistoric Settlements in Bulaghi Valley: Iranian/German Rescue Excavations at Sites DB91 and DB119, Abstracts*, edited by M. Azarnash, pp. 13–17. Tehran: Iranian Center for Archaeological Research.

oi.uchicago.edu

2007 "Symposium on the Latest Results of Archaeological Excavations at Tang-e Bolaghi." In *Prehistoric Settlements in Bulaghi Valley: Iranian/German Rescue Excavations at Sites DB91, DB119, DB73 and DB131, Abstracts*, pp. 12–13. Tehran: Iranian Center for Archaeological Research.

Henrickson, Elizabeth F.

1989 "Ceramic Evidence for Cultural Interaction between the Ubaid Tradition and the Central Zagros Highlands, Western Iran." In *Upon this Foundation*: *The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 369–403. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Herzfeld, Ernst

1929 "Prehistoric Persia 1: A Neolithic Settlement at Persepolis: Remarkable New Discoveries." *London Illustrated News*, May 25, 1929.

Hodder, Ian

1982a *The Present Past: An Introduction to Anthropology for Archaeologists*. London: Batsford.

1982b *Symbols in Action: Ethnoarchaeological Studies of Material Culture*. New Studies in Archaeology. Cambridge: Cambridge University Press.

Hole, Frank

1989 "Patterns of Burial in the Fifth Millennium." In *Upon this Foundation*: *The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 149–80. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

1998 "The Spread of Agriculture to the Eastern Arc of the Fertile Crescent: Food for the Herders." In *The Origins of Agriculture and Crop Domestication* (Proceedings of the Harlan Symposium, 10–14 May 1997, Aleppo, Syria), edited by A. B. Damania, J. Valkoun, G. Willcox, and C. O. Qualset, pp. 83–92. Aleppo: International Center for Agricultural Research in the Dry Areas.

2004 "Campsites of the Seasonally Mobile in Western Iran." In *From Handaxe to Khan: Essays Presented to Peder Mortensen on the Occasion of His 70th Birthday*, edited by K. von Folsach, H. Thrane, and I. Thuesen, pp. 67–85. Aarhus: Aarhus University Press.

Hole, Frank; Kent V. Flannery; and James A. Neely

1969 *Prehistory and Human Ecology of the Deh Luran Plain: An Early Village Sequence from Khuzistan, Iran*. Memoirs of the Museum of Anthropology, University of Michigan 1. Ann Arbor: Museum of Anthropology, University of Michigan.

Kerner, S.

1993 *Vakilabad-Keramic*. Berliner Beiträge zum Vorderen Orient 13. Berlin: Dietrich Riemer.

Kohl, P.

1992 Review of *Upon this Foundation*: *The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen. *American Antiquity* 57: 371–72.

Kole, J. E.

1980 "Bakun Settlement Patterns." In *Problems of Large Scale, Multi-disciplinary Regional Archaeological Research: The Malyan Project*, edited by W. M. Sumner, pp. 83–88. Ohio: Symposium at the Annual Meeting of the Society for American Archaeology.

Langsdorff, Alexander, and Donald E. McCown

1942 *Tall-i-Bakun A: Season of 1932*. Oriental Institute Publications 59. Chicago: University of Chicago Press.

Lloyd, Seton

1978 *The Archaeology of Mesopotamia: From the Old Stone Age to the Persian Conquest*. London: Thames & Hudson.

oi.uchicago.edu

Margueron, J.-C.

1989 "Architecture et société à l'époque d'Obeid." In *Upon this Foundation*: *The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 43–77. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Mashkour, Marjan

2006 "Faunal Remains from Tol-e Nurabad and Tol-e Spid." In *The Mamasani Archaeological Project Stage One: A Report on the First Two Seasons of the ICAR-University of Sydney Joint Expedition to the Mamasani District, Fars Province, Iran*, edited by D. T. Potts and K. Roustaei, pp. 135–46. Tehran: Iranian Center for Archaeological Research.

Mashkour, Marjan; A. Mohaseb; and K. Debue

2006 "Towards a Specialised Subsistence Economy in the Marv Dasht Plain: Preliminary Zooarchaeological Analysis of Tall-e Mushki, Tall-e Jari A and B, and Tall-e Bakun A and B." In *The Origins of State Organizations in Prehistoric Highland Fars, Southern Iran, Excavations at Tall-e Bakun*, by A. Alizadeh, pp. 101–05. Oriental Institute Publications 128. Chicago: The Oriental Institute.

McCall, B.

2009 The Mamasani Survey (Fars Province, Iran). Unpublished Ph.D. thesis, University of Sydney.

Miller, Naomi F., and M. Kimiaie

2006 "Some Plant Remains from the 2004 Excavations of Tall-e Mushki, Tall-e Jari A and B, and Tall-e Bakun A and B." In *The Origins of State Organizations in Prehistoric Highland Fars, Southern Iran, Excavations at Tall-e Bakun*, by A. Alizadeh, pp. 107–18. Oriental Institute Publications 128. Chicago: The Oriental Institute.

Miroschedji, P. de

1972 "Prospections archéologiques dans les vallées de Fasa et de Darab (rapport préliminaire)." In *Proceedings of the 1st Annual Symposium on Archaeological Research in Iran*, edited by F. Bagherzadeh, pp. 1–7. Tehran: Iranian Center for Archaeological Research.

Moghaddam, A., editor

2005 *Archaeological Surveys in Mianab Plain, Shushtar*. Archaeological Report Monographs Series 8. Tehran: Iranian Center for Archaeological Research, Tehran.

Moghaddam, A., and N. Miri

2003 "Archaeological Research in the Mianab Plain of Lowland Susiana, South-western Iran." *Iran* 41: 99–137.

2007 "Archaeological Surveys in the 'Eastern Corridor,' South-western Iran." *Iran* 45: 23–55.

Nissen, Hans J.

1976 "The Behbehan Plain in the 5th Millennium B.C." In *The Memorial Volume of the VIth International Congress of Iranian Art and Archaeology, Oxford September 11–16th 1972*, edited by M. Y. Kiani, pp. 273–79. Tehran: Iranian Center for Archaeological Research.

1988 *The Early History of the Ancient Near East, 9000–2000 B.C*. Translated by Elizabeth Lutzeier, with Kenneth Northcott. Chicago: University of Chicago Press.

1989 "The Ubaid Period in the Context of the Early History of the Ancient Near East." In *Upon this Foundation*: *The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 245–55. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Nissen, Hans J., and A. Zagarell

1976 "Expedition to the Zagros Mountains." In *Proceedings of the IVth Annual Symposium on Archaeological Research in Iran, 1975*, edited by F. Bagherzadeh, pp. 159–89. Tehran: Iranian Center for Archaeological Research.

Petrie, Cameron A.; A. Asgari Chaverdi; and Mojgan Seyedin

2005 "From Anshan to Dilmun and Magan: The Spatial and Temporal Distribution of Kaftari and Kaftari-Related Ceramic Vessels." *Iran* 43: 49–86.

oi.uchicago.edu

2006a "Excavations at Tol-e Spid." In *The Mamasani Archaeological Project Stage One: A Report on the First Two Seasons of the ICAR-University of Sydney Joint Expedition to the Mamasani District, Fars Province, Iran*, edited by D. T. Potts and K. Roustaei, pp. 89–134. Tehran: Iranian Center for Archaeological Research.

Petrie, Cameron A.; K. Roustaei; C. Doherty; J. Duffett; and A. Kananian

In preparation *Ceramics and Socio-economic Development in Highland Southwest Iran from the 6th to the 4th Millennia B.C.: Insights from Mamasani, Fars.*

Petrie, Cameron A.; Lloyd R. Weeks; Daniel T. Potts; and K. Roustaei

2006b "Perspectives on the Cultural Sequence of Mamasani." In *The Mamasani Archaeological Project Stage One: A Report on the First Two Seasons of the ICAR-University of Sydney Joint Expedition to the Mamasani District, Fars Province, Iran*, edited by D. T. Potts and K. Roustaei, 157–84. Tehran: Iranian Center for Archaeological Research.

Petrie, Cameron A.; A. Sardari Zarchi; and A. Javanmard Zadeh

2007 "Transformations in Fourth Millennium B.C. Fars: Further Excavations at Tol-e Spid." *Iran* 45: 301–09.

Pires-Ferreira, J. W.

1977 "Tepe Tula'i: Faunal Remains from an Early Campsite in Khuzistan, Iran." *Paléorient* 3: 275–80.

Pollock, Susan

1989 "Power Politics in the Susa A Period." In *Upon this Foundation*: *The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. Henrickson and I. Thuesen, pp. 281–92. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Pollock, Susan; Reinhard Bernbeck; and Kamyar Abdi, editors

2010 *The 2003 Excavations at Tol-e Baši, Iran: Social Life in a Neolithic Village*. Archäologie in Iran und Turan 10. Mainz: Philipp von Zabern.

Potts, Daniel T.

1986 "A Contribution to the History of the Term 'Ğamdat Naşr'." In *Ğamdat Naşr: Period or Regional Style?* (Papers Given at a Symposium Held in Tübingen, November 1983), edited by U. Finkbeiner and W. Röllig, pp. 17–32. Beihefte zum Tübinger Atlas des Vorderen Orients, Reihe B, Nr. 62. Wiesbaden: Ludwig Reichert.

2008 Review of *The Origins of State Organizations in Prehistoric Highland Fars, Southern Iran, Excavations at Tall-e Bakun*, by A. Alizadeh. *Bibliotheca Orientalis* 65/1–2: 179–215.

Potts, Daniel T.; A. Asgari Chaverdi; Cameron A. Petrie; A. Dusting; F. Farhadi; I. K. McRae; S. Shikhi; E. H. Wong; A. Lashkari; and A. Javanmard Zadeh

2007 "The Mamasani Archaeological Project, Stage Two: Excavations at Qaleh Kali (Tappeh Servan/Jinjun [MS 46])." *Iran* 45: 287–300.

Potts, Daniel T., and K. Roustaei, editors

2006 *The Mamasani Archaeological Project Stage One: A Report on the First Two Seasons of the ICAR-University of Sydney Joint Expedition to the Mamasani District, Fars Province, Iran*. Tehran: Iranian Center for Archaeological Research.

Potts, Daniel, T.; K. Roustaei; Cameron A. Petrie; and Lloyd Weeks, editors

2009 *The Mamasani Archaeological Project Stage One: A Report on the First Two Seasons of the ICAR-University of Sydney Joint Expedition to the Mamasani District, Fars Province, Iran*. 2nd edition. Biblical Archaeology Review, International Series S2044. Archaeopress, Oxford.

Potts, Daniel T.; K. Roustaei; Lloyd R. Weeks; and Cameron A. Petrie

2006 "The Mamasani District and the Archaeology of Southwestern Iran." In *The Mamasani Archaeological Project Stage One: A Report on the First Two Seasons of the ICAR-University of Sydney Joint Expedition to the Mamasani District, Fars Province, Iran*, edited by D. T. Potts and K. Roustaei, pp. 1–16. Tehran: Iranian Center for Archaeological Research.

oi.uchicago.edu

Price, T. D.; C. Knipper; G. Grupe; and V. Smrcka

2004 "Strontium Isotopes and Prehistoric Human Migration: The Bell Beaker Period in Central Europe." *European Journal of Archaeology* 7: 9–40.

Prickett, M.

1986 "Settlement during the Early Periods." In *Excavations at Tepe Yahya, Iran, 1967–1976: The Early Periods*, edited by T. W. Beale, pp. 215–46. American School of Prehistoric Research Bulletin 38. Cambridge: Peabody Museum of Archaeology and Ethnology.

Renfrew, C.

2004 "Towards a Theory of Material Engagement." In *Rethinking Materiality: The Engagement of Mind with the Material World*, edited by E. DeMarrais, C. Gosden, and C. Renfrew, pp. 23–31. McDonald Institute Monographs 1363–1349. Cambridge: McDonald Institute for Archaeological Research.

Roaf, Michael

1989 "Ubaid Social Organisation and Social Activities as Seen from Tell Madhur." In *Upon this Foundation*: *The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 91–147. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

1990 *Cultural Atlas of Mesopotamia and the Ancient Near East*. New York: Facts on File.

Roustaei, K.; K. Alamdari; and Cameron A. Petrie

2006 "Landscape and Environment in Mamasani." In *The Mamasani Archaeological Project Stage One: A Report on the First Two Seasons of the ICAR-University of Sydney Joint Expedition to the Mamasani District, Fars Province, Iran*, edited by D. T. Potts and K. Roustaei, pp. 17–30. Tehran: Iranian Center for Archaeological Research.

Sami, Ali

1956 *Pasargadae: The Oldest Imperial Capital of Iran*. Shiraz: Musavi Printing Office.

Schmidt, Erich F.

1937 "Tol-e-Bakun: Prehistoric Mound near Persepolis." *University of Pennsylvania Museum Bulletin* 7: 27–28.

1939 "Tall-i Bakun." In *The Treasury of Persepolis and Other Discoveries in the Homeland of the Achaemenians*, pp. 121–29. Oriental Institute Communications 21. Chicago: University of Chicago Press.

Stein, Gil J.

1994 "Economy, Ritual and Power in 'Ubaid Mesopotamia." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 35–46. Monographs in World Archaeology 18. Madison: Prehistory Press.

Stein, M. Aurel

1936 "An Archaeological Tour in the Ancient Persis." *Iraq* 3: 179–225.

1937 *Archaeological Reconnaissances in North-western India and South-eastern Iran*. London: Macmillan.

Sumner, William M.

1972 Cultural Development in the Kur River Basin, Iran: An Archaeological Analysis of Settlement Patterns. Ph.D. dissertation, University of Pennsylvania.

1988 "Prelude to Proto-Elamite Anshan: The Lapui Phase." *Iranica Antiqua* 23: 23–44.

1990 "Full-coverage Regional Archaeological Survey in the Near East: An Example from Iran." In *The Archaeology of Regions: A Case for Full-coverage Survey*, edited by S. K. Fish and S. A. Kowalewski, pp. 87–115. Smithsonian Series in Archaeological Inquiry. Washington, D.C.: Smithsonian Institution Press.

1994 "The Evolution of Tribal Society in the Southern Zagros Mountains, Iran." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 47–65. Monographs in World Archaeology 18. Madison: Prehistory Press.

Vanden Berghe, Louis

1952 "Archaeologische Opzoekingen in de Marv Dasht Vlakte (Iran)." *Jaarbericht Ex Orient Lux* 12: 211–20.

1954 "Archaeologische navorsingen in de omstreken van Persepolis." *Jaarbericht Ex Orient Lux* 13: 394–408.

oi.uchicago.edu

Vander Linden, M.
2007 "What Linked the Bell Beakers in Third Millennium B.C. Europe?" *Antiquity* 81: 343–52.

Voigt, Mary M., and R. H. Dyson
1992 "Chronology of Iran, ca. 8000–2000 B.C." In *Chronologies of Old World Archaeology*, edited by R. W. Ehrich, vol. 1, pp. 122–78; vol. 2, pp. 125–53. Chicago: University of Chicago Press.

Weeks, Lloyd R.; K. Alizadeh; L. Niakan; K. Alamdari (trench A); A. Khosrowzadeh; and M. Zeidi (trench B)
2006a "Excavations at Tol-e Nurabad." In *The Mamasani Archaeological Project Stage One: A Report on the First Two Seasons of the ICAR-University of Sydney Joint Expedition to the Mamasani District, Fars Province, Iran*, edited by D. T. Potts and K. Roustaei, pp. 31–88. Tehran: Iranian Center for Archaeological Research.

Weeks, Lloyd R.; K. Alizadeh; L. Niakan; K. Alamdari; M. Zeidi; A. Khosrowzadeh; and B. McCall
2006b "The Neolithic Settlement of Highland SW Iran: New Evidence from the Mamasani District." *Iran* 44: 1–31.

Weiss, Harvey
1976 Ceramics for Chronology: Discriminant and Cluster Analysis of Fifth Millennium Ceramic Assemblages from Qabr Sheykheyn, Khuzistan. Ph.D. dissertation, University of Pennsylvania.

Wright, Henry T., editor
1979 *Archaeological Investigations in Northeastern Xuzestan, 1976*. Museum of Anthropology Technical Reports 10. Ann Arbor: Museum of Anthropology, University of Michigan.
1981 *An Early Town on the Deh Luran Plain: Excavations at Tepe Farukhabad*. Memoirs of the Museum of Anthropology 13. Ann Arbor: University of Michigan.

Wright, Henry T., and Elizabeth Carter
2003 "Archaeological Survey on the Western Ram Hormuz Plain." In *Yeki Bud, Yeki Nabud: Essays on the Archaeology of Iran in Honor of William M. Sumner*, edited by N. F. Miller and K. Abdi, pp. 61–82. Los Angeles: Cotsen Institute of Archaeology, University of California.

Yener, K. Aslıhan
2005 *The Amuq Valley Regional Projects*, Volume 1: *Surveys in the Plain of Antioch and Orontes Delta, Turkey, 1995–2002*. Oriental Institute Publications 131. Chicago: The Oriental Institute.

Zagarell, A.
1979 "The Mountain Zone of South-west Iran: Meeting Point of Lowland and the Central Plateau in the Late Prehistoric Period." In *Akten des VII. Internationalen Kongresses für Iranische Kunst und Archäologie*, pp. 56–63. Berlin: Dietrich Riemer.
1982 *The Prehistory of the Northeast Bahtiyari Mountains, Iran: The Rise of a Highland Way of Life*. Beihefte zum Tübinger Atlas des Vorderen Orients 42. Wiesbaden: Ludwig Reichert.

Zeder, M. A., and M. J. Blackman
2003 "Economy and Administration at Banesh Malyan: Exploring the Potential of Faunal and Chemical Data for Understanding State Process." In *Yeki Bud, Yeki Nabud: Essays on the Archaeology of Iran in Honor of William M. Sumner*, edited by N. F. Miller and K. Abdi, pp. 121–39. Los Angeles: Cotsen Institute of Archaeology, University of California.

Zeidi, M.; B. McCall; and A. Khosrowzadeh
2006 "Survey of Dasht-e Rostam-e Yek and Dasht-e Rostam-e Do." In *The Mamasani Archaeological Project Stage One: A Report on the First Two Seasons of the ICAR-University of Sydney Joint Expedition to the Mamasani District, Fars Province, Iran*, edited by D. T. Potts and K. Roustaei, pp. 147–68. Tehran: Iranian Center for Archaeological Research.

oi.uchicago.edu

17

BAKUN-PERIOD SITES IN DARRE-YE BOLĀGHI, FARS

BARBARA HELWING, *Deutsches Archäologisches Institut*
MOJGAN SEYEDIN, *Iranian Center for Archaeological Research, Iranian Cultural Heritage and Tourism Organization*

DEFINITION OF BAKUN

The Bakun period of highland Fars, first recognized and defined in 1929 on the basis of the pioneering excavations of Ernst Herzfeld at Tall-i Bakun, a small site with two mounds (Bakun A and B) located in the immediate vicinity of Persepolis (Herzfeld 1929), represents the southern variety of Iranian Chalcolithic painted pottery groups. The field seasons 1932 and 1937 directed by Erich Schmidt and his assistant Alexander Langsdorff (Langsdorff and McCown 1942; Schmidt 1939) yielded masterfully painted pottery with highly stylized animals and complex geometric designs as the main characteristic, within the context of a settlement site with large-scale pisé architecture, pottery kilns, and stone and copper tools, and with seals and seal impressions as administrative devices.

The pioneer excavations at Tall-i Bakun were soon followed by soundings and surface investigations at several other sites in Fars, most notably Seh Asiab and Do Tulan in the Pasargadae Plain (Dasht-i Morghab) investigated in the early 1930s by Aurel Stein (M. A. Stein 1936). Ali Sami carried out soundings in Tall-i Khar and Tall-i Nokhodi, also in the Dasht-i Morghab (Sami 1971). Further surface collections and soundings were undertaken by Louis Vanden Berghe especially in the Sivand and Kur River area. He used these data to establish a first chronological sequence for the Fars Chalcolithic period (Vanden Berghe 1952, 1954). In the 1960s, Claire Goff expanded the excavations at Tall-i Nokhodi (Goff 1963, 1964), and a Japanese group began investigations in Tall-i Gap in the Marv Dasht (Egami and Masuda 1962).

These joint efforts allowed the definition of a cultural sequence for the Fars Chalcolithic. Following Vanden Berghe, a subdivision into three phases represented by the material from Bakun B (early), Tall-i Gap (middle), and Bakun A (late) can be proposed. However, this sequence seems to include gaps and transitional phases that are still not well known (Alizadeh 2006: 46–47). Alizadeh has recently suggested a general periodization of the Fars prehistoric periods (Alizadeh 2006: 7–13), with a terminology modeled on the systems proposed by Helene Kantor and Pinhas Delougaz (following Le Breton 1957) for the Susiana sequence, and (under their guidance) by Y. Majidzadeh for the Central Plateau (Majidzadeh 1976: 92–100, esp. 96). The black-on-buff pottery known from the assemblages of Tall-i Bakun B and Tall-i Gap seems to appear in the Middle Fars 1 (Bakun B2) phase without any recognizable predecessor. This, together with the observation that the Bakun B2 pottery has close parallels in the Middle Susiana ceramic- and pottery-painting motif corpus, leads Alizadeh to assume that this pottery group represents newcomers, either migrating groups (e.g., settling nomads) or itinerant potters from Susiana (Alizadeh 2006: 11). New data from soundings by the Mamasani Archaeological Project, however, seem to hint at a possible local cultural continuity, while the appearance of black-on-buff can be regarded as just one facet of the spread of buff wares over large areas of southwest Asia (Petrie et al. 2006: 172) through various mechanisms. In the following Middle Fars 2, represented by the material from Tall-i Gap, the characteristic black-on-buff ware continues, but the motifs show only few links with the Bakun B2 corpus. There is equally also only a limited overlap in the decorative motifs of the gap and the earliest Bakun A material, possibly indicating a hiatus between these two phases (Alizadeh 2006: 12). The main occupation of Bakun A, with the "classic Bakun pottery," represents the Late Fars phase. During the Late Fars phase, the distribution of Bakun pottery reaches a formerly unknown wide scale. Bakun sites appear in previously unsettled valleys, and the occurrence of administrative devices, imported raw materials, and the like indicate a higher degree of social complexity than the previous periods.

oi.uchicago.edu

Evidence for the reconstruction of the way of life of the Bakun population is still very scanty. On the evidence of the few excavated Bakun-period sites, the reconstruction of a mixed-subsistence economy based on cultivation and animal husbandry supplemented by hunting (and probably gathering) seems reasonable. Limited analyses of faunal remains from Marv Dasht (Mashkour 2006b) and the Mamasani district (Mashkour 2006a) provide evidence for a trend toward increasing reliance on herding strategies in the Middle and Late Fars phases that replace an earlier hunting economy.[1] Study of a small sample of botanical remains has failed to provide unquestionable evidence with regard to subsistence, but indicates an open terrain and rather arid conditions that might have favored agro-pastoralism (Miller and Kimiaie 2006). The lithic industry, comprising sickle blades and other blade-based debitage; ground-stone implements, consisting mostly of grinding and pounding stones; spindle whorls suggesting some spinning and possibly weaving activities; and a few small copper implements all indicate a direct continuity of subsistence and craft traditions from the preceding Neolithic period. Human burials were until recently not known at all (Alizadeh 2006: 92). However, the large building complex uncovered in Bakun A that yielded abundant administrative features raises questions about the character and social organization of the Late Fars period.

BAKUN AND THE UBAID

In the 1930s, when the Bakun period became known to the archaeological public, the definition of prehistoric periods in southwestern Asia was still in its infancy and relied largely on comparisons with material from Susa. The Susa I and Susa II phases were defined on the basis of excavations by de Morgan and Mecquenem beginning in 1919 (Childe 1935: 136). The excavations at Tell al-Ubaid (Hall and Woolley 1927) had provided complementary evidence for the existence of a prehistoric period with painted pottery in the Mesopotamian alluvial plain. Its internal sequencing and the periodization of the following periods remained unknown, so that it seemed as if the Ubaid occurred in southern Mesopotamia suddenly and without predecessor. This situation led to the formulation of various hypotheses regarding the beginning of the occupation of the Mesopotamian alluvial plain and the origin of the supposed settlers known as the "Sumerian question" (Frankfort 1932). The steppes of northern Syria and the mountain ranges east of Mesopotamia were among the likely candidates for the homeland of the Sumerians, as was the coast of the Persian Gulf south of Mesopotamia (Childe 1935: 115). It is in this latter region that Childe assumed a common origin for the prehistoric cultures with painted pottery, that is, the Ubaid in Mesopotamia and the painted Susa I ware in Susiana.

Within this framework the painted Bakun pottery seemed a likely candidate as a predecessor of the Susa I and the Ubaid cultures. This conviction can be illustrated by quoting Alexander Langsdorff, Herzfeld's and later Schmidt's assistant at Bakun, who writes, "… in the plain between the Euphrates and the Tigris a comparable ware, but less imaginative and visibly decadent, occurs in sherds only. We meet this early culture in its complete purity and originality only in the region of its origin, the highland of Iran" (Langsdorff and McCown 1942).

After a detailed chronological sequence for the Ubaid period was established (Oates 1960), it was realized not only that the oldest painted Ubaid groups were found in the southern alluvium, but also that they represented an autochthonous, local development (Oates 1983: 260–62).[2] During the later part of this period, when the Ubaid reached a wide distribution and replaced other traditions such as the Halaf, various regional groups could be distinguished. The consequence of this new temporal and spatial pattering was a reversal of the perspective on the origin of the prehistoric painted-pottery groups in western Asia, with a new focus on the south. Explanations for this wide distribution of Ubaid, or rather "Ubaidoid"/"Ubaid-related," assemblages from eastern Anatolia to northwestern Iran and southward into the Persian Gulf were sought through various models of culture contact and diffusion. In analogy to the better-known "Uruk expansion" (Algaze 1989), "Ubaid expansion" models were formulated to explain this distribution pattern (Oates 1993; Stein and Özbal 2007; Sürenhagen 1986).[3]

---

[1] Tall-i Gap, which, according to Alizadeh (2006: 262, table 30), dates to Middle Fars 2, yielded a faunal sample consisting entirely of wild gazelle (Takai, in Egami and Masuda 1962). The reliability of the taxa identification is questioned, and the material is not available for re-evaluation (Mashkour 2006b: 105).

[2] The chronological precedence of the Ubaid, in the Mesopotamian south was already established by Oates' Ubaid 1–4 sequence, since the Ubaid only begins with the Ubaid 3 in the north Syrian plains and the mountain zones. To this can now be added the Ubaid 0 "Oueili phase" as the oldest painted-pottery phase in the southern alluvium.

[3] Note even the title of this conference: "The Ubaid Expansion? Cultural Meaning, Identity and Integration in the Lead-up to Urbanism."

oi.uchicago.edu

The phenomenon observed for the internal development of the Ubaid and the subsequent spread of its later pottery styles over a vast area can equally be noted for the Bakun. The beginning of the black-on-buff-pottery tradition in Middle Fars 1, possibly under influence from Susiana, can be correlated chronologically with the Eridu to Hajji Mohammad phases of the Ubaid (Ubaid 1–2). The wide distribution of Bakun material during the later phases (Bakun A/Late Fars) mirrors similar trends observed for the Ubaid, which spreads as far as eastern Anatolia during the Ubaid 3–4 period. A trend toward increasing complexity, visible through the use of administrative devices and an increase in long-distance trade, can also be discerned for both.

An "expansion" model, such as the hypothesis proposed by some with regard to greater Mesopotamia, is not, however, applicable to the Bakun A/Late Fars development. Instead, the specific environmental situation of the highlands has been considered, using different perspectives on human-environment interactions and subsistence strategies. Among these, the nomadic hypothesis is modeled, adhering closely to the modern ethnographic record. The specific adaptation implied in a pastoralist lifestyle seems to be better suited to match the archaeological realities.

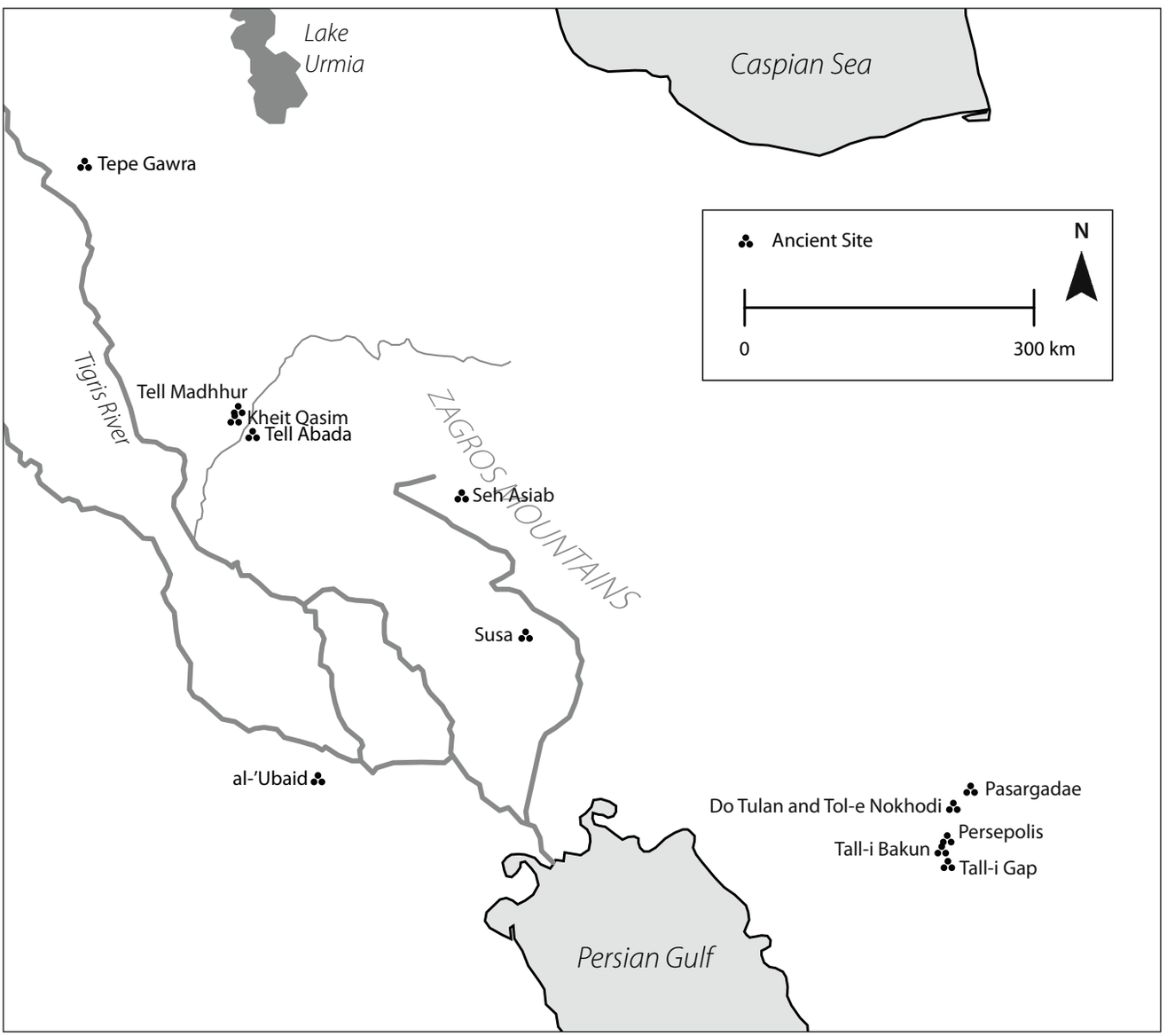


Figure 17.1. Sites mentioned in the text

oi.uchicago.edu

THE NOMADIC HYPOTHESIS

Abbas Alizadeh, in his re-evaluation of the Tall-i Bakun material and documentation, and later by including additional evidence from surveys in the Fars region (Alizadeh 1988a, 1988b, 1994, 2003, 2004, 2006), raises the hypothesis that Bakun A, with its large building complex, its seals, and its seal impressions, can be regarded as a centrally administered communal storage center used by mobile nomadic groups. It had previously been suggested by Elisabeth Henrickson and Alan Zagarell that the emergence of pastoral nomadism, a typical Iranian highland way of life, can be traced back to the fifth millennium B.C. Site-distribution models are at the basis of these patterns, as revealed by systematic surveys in the Kangavar Valley (Henrickson 1985) and in the Chahar Mahal Bakhtiari area (Zagarell 1982). Alizadeh elaborates on these models, using the archaeological evidence from the Tall-i Bakun "administrative building" and survey data from the Marv Dasht and the Kur River Basin on the one side, and theoretical considerations built on ethnographic data from modern Iranian pastoralist groups on the other. In his model he emphasizes the importance of mobile pastoralists within the broader process of early state formation that has been mostly overlooked for two reasons: the difficulty in recognizing pastoralist camp sites in the archaeological record, and the preconception that no interaction between mobile and sedentary groups existed in the past.

Alizadeh proposes instead the reconstruction of "enclosed nomadism," with pastoralist communities existing in close interaction with a sedentary part of the population, with whom they may additionally have been kin related (Alizadeh 2006: 4). The pastoralists would have moved vertically, between the lowland winter camps and the highland summer pastures, but only over short distances, remaining in their winter or summer camps for several months, where they might even have constructed semi-permanent housing, necessarily in close proximity to the sedentary villages with whom they would have exchanged goods and labor. Those semi-permanent houses would have transformed into archaeological sites that are not immediately distinguishable from permanent settlements, although such pastoralist camp sites might be smaller and flatter and consist of less debris accumulation and of more ash and midden deposits. The pastoralist groups are thus invisible in the archaeological record, but could nevertheless have acted as power players in the formation of early complexity. Given a certain level of complexity and power accumulation, they may even have dominated the sedentary farming communities. Such a dual social system also holds considerable potential for conflicts regarding land use and ownership among the different segments of society.

The pastoralists might additionally have played a role in the transportation of goods over long distances, most likely between larger centers, through trade or gift exchange. Within such a dual social system, sedentary client villages would be producers of goods that were later transported by the pastoralists to distant areas. Besides long-distance trade, marriage alliances might be established between leading families over a larger distance, which might explain the wide distribution of specific pottery painting styles along the major overland routes, following the traditional nomadic wandering routes (Alizadeh 2003). As a result of these transactions, pastoralists could accumulate wealth (and power) that required safeguarding and administration. Here begins the interpretation of Tall-i Bakun A, which has elements consistent with a central place but is much too small to be a market town, as a nomadic storage and production place and possibly trade center, and possibly the seat of a powerful tribe leader, catering to pastoralists in the wider area. A comparable model is suggested for centers of the Ubaid period such as Tell Madhhur (Killick and Roaf 1979; Roaf 1989; Watson 1984), Kheit Qasim (Forest 1984a, 1984b), Tepe Gawra (Rothman 2002; Tobler 1950), and Tell Abada (Jasim 1985).

This hypothesis is plausible but remains largely theoretical. Pastoralist camp sites would indeed leave only scarce archaeological material, possibly post holes, fireplaces, and some structures related to the herding, feeding, and penning of animals. However, if one assumes the existence of seasonal pastoralist settlements with permanent structures, it becomes impossible to distinguish them from permanent farming villages, were it not for some aspects of seasonality that should be visible in the excavated ecofactual record. Following Marjan Mashkour (Mashkour 2003) and others, a few indicators for seasonal occupation exist. Regarding animal management, lambs are born in spring so that late spring/early summer might be the time to slaughter young animals. The concentration of specific age groups among faunal remains may therefore indicate narrow slots of slaughtering time. Using a similar logic, the collection of seasonally available plant foods can indicate the seasonal usage of the place. Currently, ecofact samples available for Bakun-period sites are neither large enough nor detailed enough to permit such studies. Another possible approach could be the study of isotope ratios in human and animal remains, which provide evidence on the origin and possible roaming area covered by individuals within their lifetime.

oi.uchicago.edu

RESCUE WORK IN DARRE-YE BOLĀGHI

In spring 2005, the Iranian Cultural Heritage and Tourism Organization (ICHTO) invited foreign teams to participate in rescue excavations in the zone that will be flooded with the construction of the Sivand Dam, known as Tang-i Bolāghi or, more correctly, Darre-ye Bolāghi. As a joint project, the German Archaeological Institute together with the ICHTO carried out two seasons of fieldwork at four Chalcolithic sites within the flooding zone.

Darre-ye Bolāghi is located in Fars province in southern Iran (fig. 17.2). It is a small plain at 1,800 m above sea level enclosed by high mountains. The plain represents a naturally protected and easily defendable area and is accessible only through two narrow gorges in the northeast and in the south. This is where the Polvar River, farther downstream also called the Sivand, enters and leaves the plain, coming from the plain of Pasargadae in the northeast and continuing southward where it joins with the Kur River 80 km downstream, close to Persepolis. The climate is dry and moderately hot in summer (with cool nights), and cold and wet in winter. Nomads of the Basseri tribes pass through the area regularly when they move between their summer and winter pastures, providing a highly suggestive picture of what life in ancient times may have looked like.

Surveys by the ICHTO in the Darre-ye Bolāghi Rescue Project area have identified two flat sites (Sites 91, 119) with no substantial prehistoric occupation layers (out of 130 findspots altogether). Alizadeh (2006: 51, 94) classifies Bakun-period survey sites into (1) mounded sites with architecture representing permanent villages, (2) mounded sites without or with little architecture representing seasonal villages, and (3) flat sites with pottery

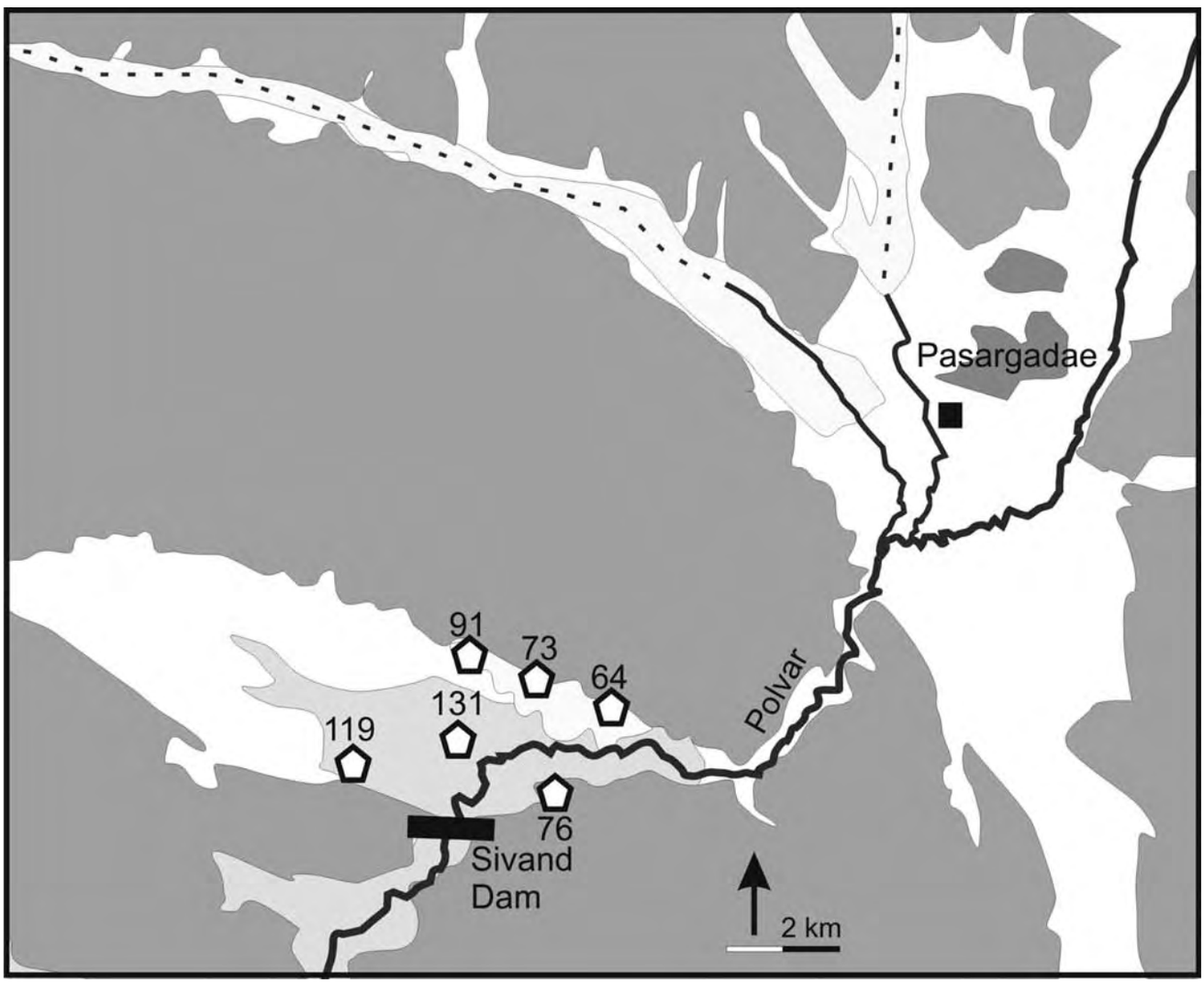


Figure 17.2. Map of Darre-ye Bolāghi- and Bakun-period sites

oi.uchicago.edu

and flint scatters representing camp sites. Sites 91 and 119 match category 3: flat camp site. The Darre-ye Bolāghi Rescue Project therefore seemed like an excellent opportunity to test some assumptions underlying the nomadic hypothesis. First, we could test whether these flat sites indeed contain no architecture and can rightfully be regarded as residues of transient occupations. Second, subsistence strategies and aspects of seasonality could be investigated by sampling for zoological, botanical, and isotope analysis. And third, the chronological depth of the occupation could be investigated.

During two long seasons of excavation and related surveying, research strategies were altered in order to adapt to problems of site taphonomy and recognizability. Geomorphological surveying and coring was carried out in response to these problems, yielding quite unexpected results. These challenge the overall reliability of surface surveys as a source of data that allow the overall reconstruction of ancient landscapes in this part of the Zagros Mountains, since two more formerly unknown sites (Sites 73, 131) were found and investigated, and two more Bakun-period occupations were recognized on historical sites under excavation by other teams within the Darre-ye Bolāghi Rescue Project: Site 64 (Barbara Kaim, pers. comm.) and Site 76 (Askari Chaverdi and Callieri 2006). With six sites recognized altogether, the Bolāghi Valley seems to have been rather intensively occupied during the Bakun period, and some chronological and functional differentiation is to be expected. Subsequently, our investigations concentrated more and more on understanding the pattern of land use and occupation in the Bolāghi Valley.[4]

Sites 73, 91, and 119 are located on the gravel fans lining the edge of the small plain Darre-ye Bolāghi, away from the fertile ground of the valley floor,[5] and all three sites are covered by architecture of later periods. Site 131 is a leveled settlement mound in the center of the small plain that was discovered during geo-archaeological sampling work.

SITE 119

Located on a rather steep, north-facing slope, this site yielded Late Bakun-period pottery in three soundings, but no secure contexts, although cultural layers accumulated to about 1.5 m in some parts of the site. The material was mostly mixed with post-Achaemenid pottery, suggesting that strong erosion on the steep slopes is a major reason why almost no solid archaeological layers are preserved. Due to the poor preservation conditions and the lack of reliable contexts there, the material is not discussed further here.

SITE 91

Site 91 extends over approximately 120 × 70 m at the foot of a gravel fan descending from the north, and it is covered with two solid architectural layers, one dating to the post-Achaemenid period and one to the seventeenth century. This later occupation has destroyed much of the prehistoric layers. The maximum height of the prehistoric cultural layers was 60 cm.

One Bakun-period floor of stamped earth with two storage jars partly sunk into it was discovered in the upper levels of square M14. This feature has no clear boundaries and does not relate to anything like a wall. The floor overlies a single-chamber pottery kiln constructed from clay and stones (fig. 17.3). This kiln is the only example of this type of construction. Apparently, the kiln was originally constructed on a natural gravel layer descending from the slope, evoking the possibility that the kiln was not related to a settlement but was deliberately constructed on the border of an ancient dry riverbed.

[4] A detailed description of the sites will be available in the final reports of the Darre-ye Bolāghi Rescue Excavations.

[5] A concentration of small sites on the edges of valleys and on the adjacent slopes was equally observed during the joint ICHTO-Oriental Institute survey northwest of the Marv Dasht (Alizadeh 2006: 54) and is interpreted as typical for largely pastoralist territories. Reasons to avoid the valley bottom may be (1) the danger of seasonal flooding of the valleys, (2) the proximity of pastures, and (3) reservation of the fertile and arable valley for agriculture.

oi.uchicago.edu

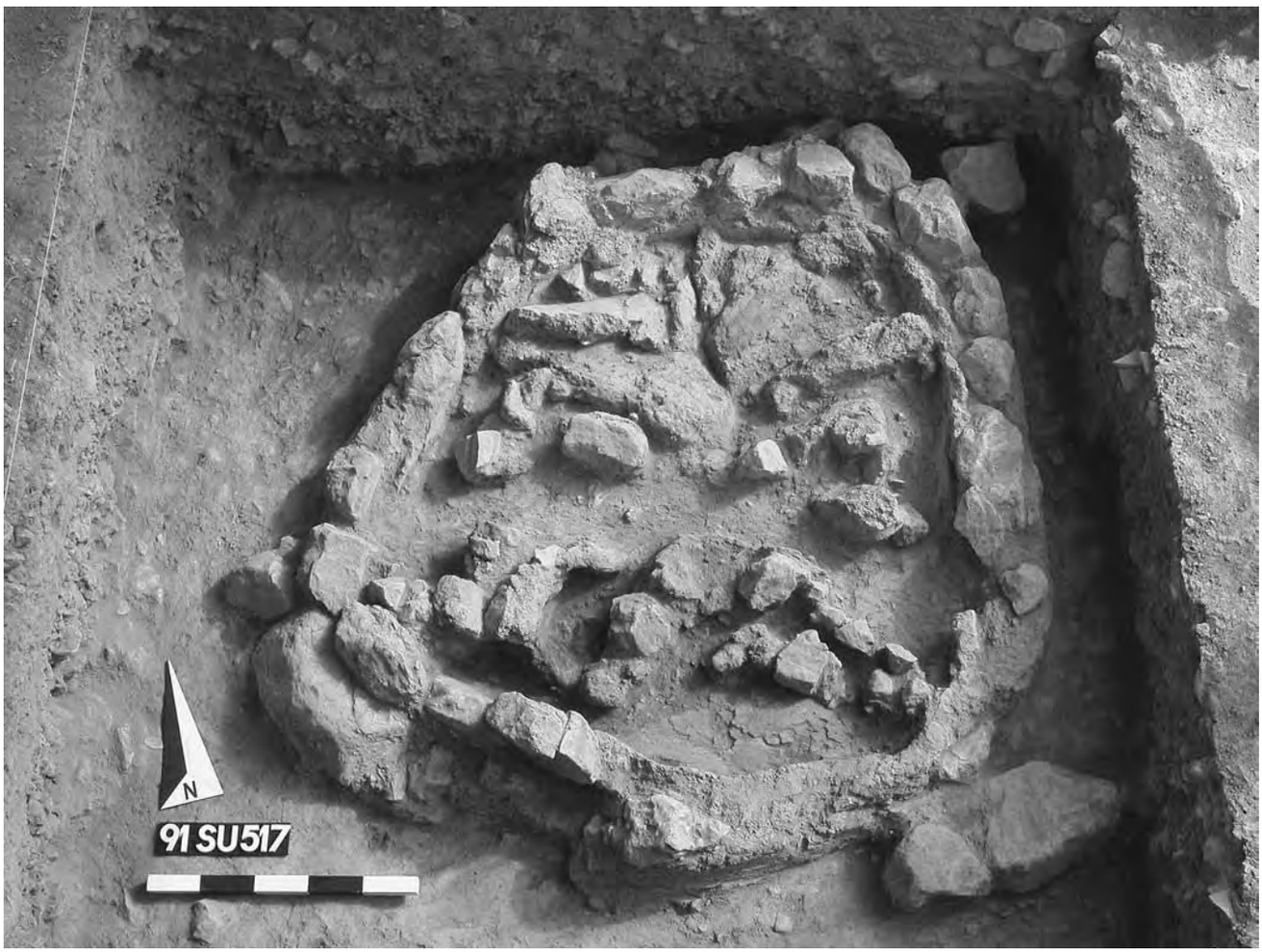


Figure 17.3. Darre-ye Bolāghi, Site 91: single-chamber kiln 517

Two other Bakun-period pottery kilns of the two-chamber "pomegranate" or "keyhole shape" type were discovered.[6] Both had suffered considerably from the later constructions that leveled most of the prehistoric levels, and they are preserved only in the lowermost part of the combustion chamber.

Interpretation of Site 91 is difficult due to serious disturbances caused by the later occupation. Apparently, much of what remained of cultural layers was leveled, and archaeological features from the Bakun occupation hardly survive except for the (razed) kilns, a few pits, and a floor not related to any standing wall. Whether this represents one of Alizadeh's category 2 mounded sites without architecture must remain an open question. In any case, the pottery kilns can be regarded as proof of the existence of pottery workshops.

[6] A typology of prehistoric pottery kilns has been developed by Alizadeh (1985), and further elaborated on by Boroffka and Becker (2004). Another systematic approach appears in Hansen Streily 2000. The Darre-ye Bolāghi Bakun-period kilns belong to the group of two-chamber kilns.

oi.uchicago.edu

SITE 73

Site 73 is located about 1 km east of Site 91. Geomagnetic mapping yielded evidence for the existence of at least nine pottery kilns there, of which five were excavated (fig. 17.4). These kilns were partly dug into Bakun-period cultural layers of a slightly older date. These older layers yielded a well-preserved burial of a young woman in a flexed position covered with three stone slabs and a round stone alignment that seems to represent a domestic structure underneath one pottery kiln. These finds indicate that Site 73 should not be regarded solely as a workshop site. Larger exposures may have led to the discovery of settlement remains, but time constraints imposed by the conditions of rescue excavation did not allow wider excavation.

All the kilns at Site 73 are of the two-chamber pomegranate type, in various stages of preservation, which allows detailed observation and a reconstruction of this kiln type. We can reconstruct the building sequence as follows. A round pit with one rectangular extension is dug into the ground. This pit serves as a combustion chamber and is fueled via the long, canal-like extension that descends from the actual floor level of the surface down into the pit. Then the walls of the pit are plastered, and a middle wall is constructed (fig. 17.5). On top of the intermediate wall, large, bread-shaped clay modules are laid out in a slightly slanted and overlapping manner, only leaving some space for flue holes (fig. 17.6). The clay modules form the upper floor, which reaches a thickness of up to 40 cm. Such a thick floor is needed since control of the firing process is apparently difficult, and high temperatures can result in

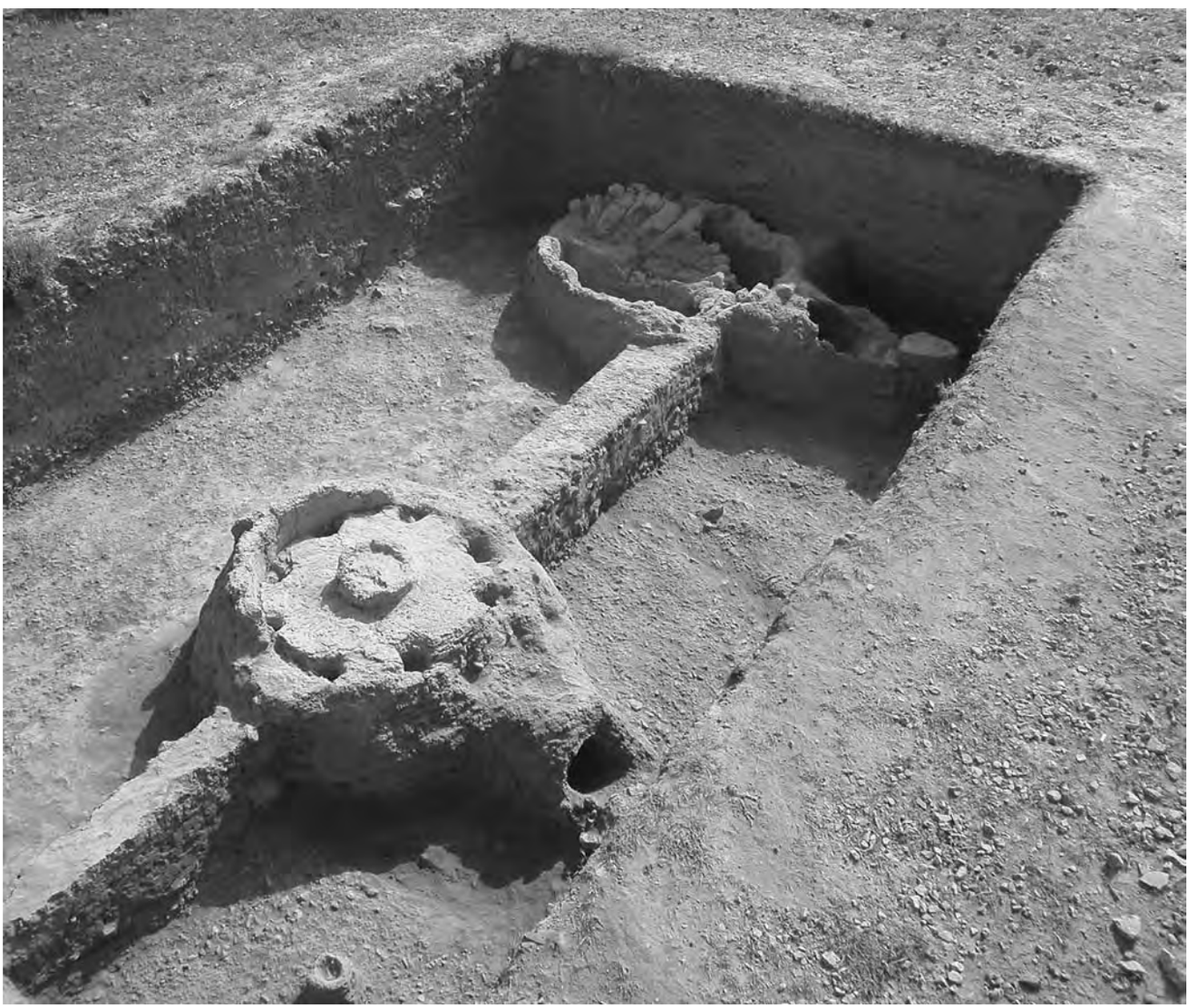


Figure 17.4. Darre-ye Bolāghi, Site 73: pottery kilns in E27

oi.uchicago.edu

the melting of the clay modules. On top of these a flat clay plaster layer is applied (fig. 17.7). This floor supports the pottery stacks to be fired and a central column that served as a support for the upper vault, which probably was constructed only as a temporary cover that had to be broken when the pottery was removed.

Excavation at Site 73 concentrated mainly on the pottery kilns, and therefore the evidence may be biased. Site 73 apparently also contained architectural remains, at least during an occupation phase slightly earlier than the kilns. However, the site does not appear as a mounded site: the specific topography, which facilitated erosion, may be responsible for this. It remains impossible to decide whether Site 73 should be regarded as a seasonal or permanent settlement, or possibly as a specialized workshop site.

Figure 17.5. Darre-ye Bolāghi, Site 73: pottery kiln 405

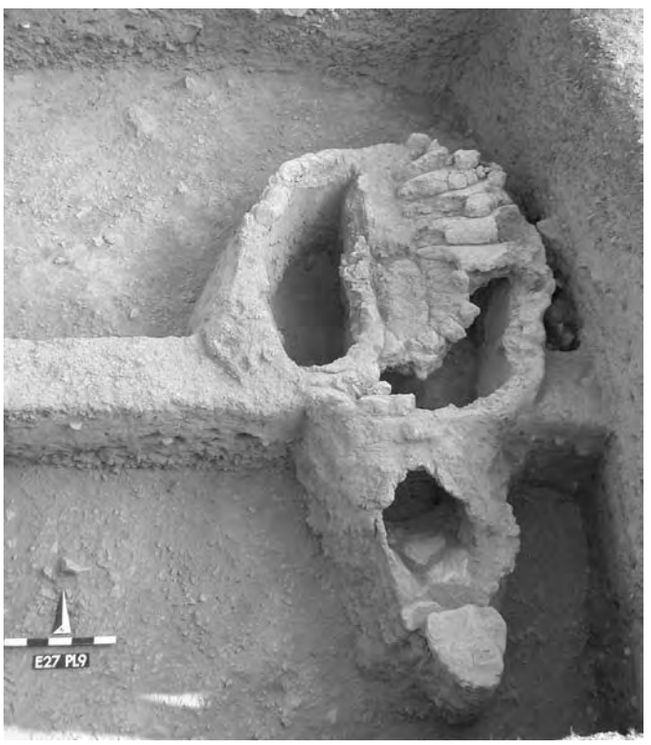


Figure 17.6. Darre-ye Bolāghi, Site 73: pottery kiln 112

Figure 17.7. Darre-ye Bolaghi, Site 73: pottery kiln 110

oi.uchicago.edu

SITE 131

The discovery of the fourth site, 131, is the result of systematic surveying and sampling in the Bolāghi Plain on the basis of information derived from Aurel Stein, who traveled the area almost seventy years ago and reported a prehistoric settlement mound located before Rahmatabad next to the road through the Bolāghi Valley. During geomorphological coring, 3 m of cultural layers, clearly of the Bakun period, were identified in a flat field just in front of Sivand Dam. We cannot be sure that this site really corresponds to the mounded site reported by Stein, but querying the local population revealed that some decades ago, a mound had existed there that has since been leveled by farmers, like so many others in Marv Dasht and its vicinity. This settlement mound on the bank of the ancient Polvar River was located in a strategic situation in front of the narrow Tang-i Bolāghi, controlling access not only to Darre-ye Bolāghi, but also to any road connecting to the summer pastures of the Dasht-i Morghab and beyond.

Geophysical mapping revealed irregular magnetic anomalies as well as more clearly defined round features. Upon excavating one of them, a further pottery kiln was uncovered (fig. 17.8), of a form related to the pomegranate type but with a central column to support the intermediate floor, rather than a division wall.

Targeting several other irregular anomalies with large-scale exposures, excavation yielded residues of domestic activities, such as floor levels, collapsed fireplaces and hearths, and pits with layers of organic materials. However, no clear outlines of building structures could be defined despite the large-scale exposures. One probe was sunk in square M10 until, at 3 m depth, virgin soil was reached. Here, the sequence equally consisted of finely layered floors and organic residues, but no walls or construction features were encountered.

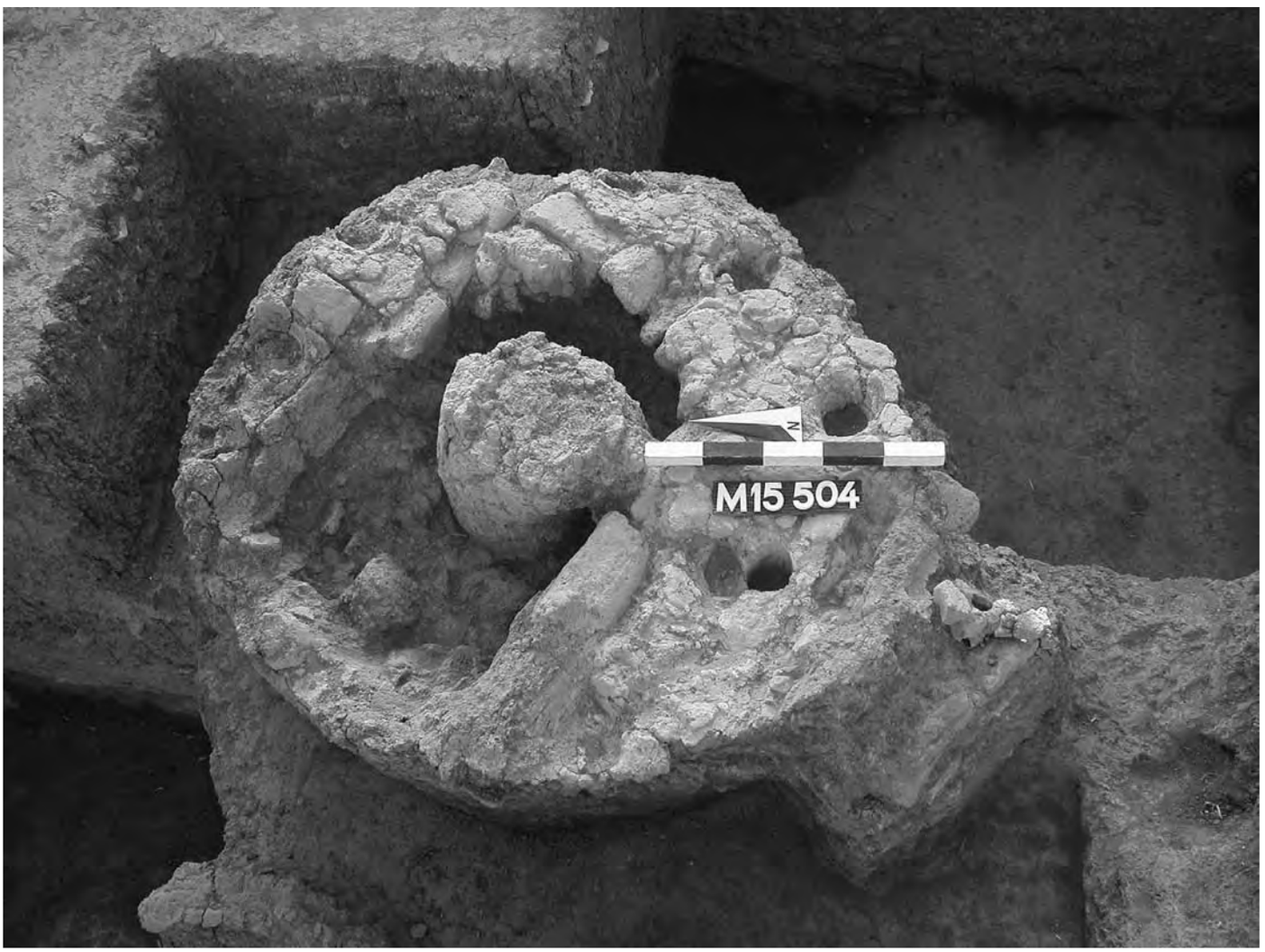


Figure 17.8. Darre-ye Bolāghi, Site 131: pottery kiln 504

oi.uchicago.edu

Three burials were found in the uppermost preserved layers in pits dug into the domestic remains. One burial consisted of the remains of nine individuals whose skeletons are only partly in anatomical order.[7] They are accompanied by a set of fourteen vessels (fig. 17.9), including two high-necked jars with a conical beaker inside the neck. A double and a single burial, all three deposited in flexed position, were found close by.

Figure 17.9 Darre-ye Bolaghi, Site 131: selection of pottery vessels from burial 115

How can the fact be explained that the large-scale exposures at Site 131, totaling 270 sq. m, did not yield any remains of solid architecture? In contrast to Site 91, where the historical occupation leveled most of the prehistoric remains, and to Site 73, where excavations concentrated on the kilns, excavations at Site 131 were laid out at a large enough scale to reveal architecture. Occupation layers at other Late Bakun-period sites such as Tall-i Bakun and Tall-i Gap apparently consisted of densely arranged pisé architecture. Tappe Rahmatabad, a recently excavated habitation site a few kilometers downstream from Site 131, is equally a densely settled village site (Bernbeck, Fazeli, and Pollock 2005).

Currently, we can think of two possible explanations for this pattern. One hypothesis is that the preserved part of the settlement mound actually represents not the mound proper but an "off-site" area originally located on the edge of the settlement. A second possibility is that the domestic structures of the Bakun-period population did not consist of solid architecture in this place, but rather of light organic materials, so that Site 131 could be attributed to Alizadeh's group 2 sites as a mounded site without architecture. Whether this indeed represents a seasonal occupation remains to be tested. We hope that results from botanical and faunal analyses, as well as isotope analysis of faunal and human remains, will provide firmer evidence on aspects of seasonality in the lifestyle of the Bakun-period population in Darre-ye Bolāghi.

[7] Kirsi Lorentz, University of Newcastle, will publish the anthropological studies on the TB 73 and 131 material that she carried out after the closing of the excavation season. We would like to thank her for her help and cooperation.

oi.uchicago.edu

POTTERY PRODUCTION

The kilns from Sites 91, 73, and 131 were certainly used for firing pottery. Numerous overfired fragments and kiln waste were found in the layers surrounding the kilns at Sites 73 and 91 (Site 131 yielded no kiln waste), allowing some insight into the pottery production process.

The pottery assemblages collected from the three sites differ considerably. Site 91 yielded the oldest assemblage, with geometrically painted pottery resembling the Tall-i Gap material, thus mainly Middle Fars 2 in date (fig. 17.10); the upper occupation layers (and the pomegranate-type pottery kilns) may have extended into the Late Fars phase. Pottery from Site 73 matches the material known from Bakun A, or Late Fars (fig. 17.11), as far as the pottery kilns are concerned. The burial is stratigraphically older but yielded no datable archaeological material. The Site 131 material is also Late Fars in date, but included motifs formerly not recorded at the other two sites.

Figure 17.10. Darre-ye Bolāghi, Site 91: pottery

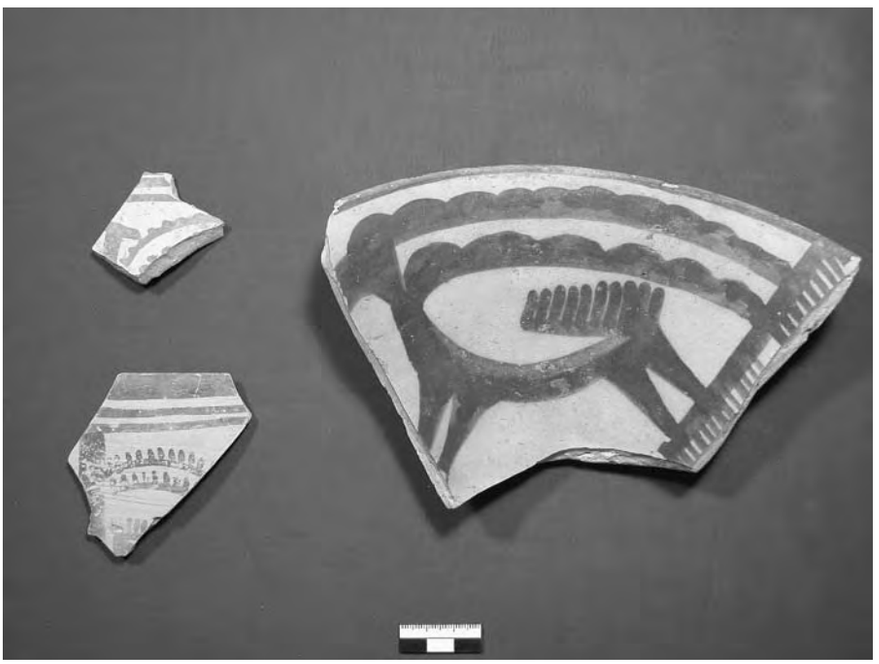


Figure 17.11. Darre-ye Bolāghi, Site 73: pottery

The pottery painting motifs recorded on the three sites yielded an abundance of different motifs.[8] Of these, many fit well into the corpus of Bakun motifs, while others are motifs that are usually considered typical for regional painting styles outside Fars, comparing with material from Susiana and the Central Plateau. In Darre-ye Bolāghi, the painting styles known from Susiana and the Central Plateau occur together with classic Bakun motifs in production waste contexts. It is hence reasonable to assume that these motifs all derive from local manufacture.[9] Whether these vessels were produced in one place (and even in single workshops) by potters of different — and possibly foreign — origin remains to be proved.

According to Alizadeh (2003), the distribution pattern of pottery painting motifs may reflect the routes of wandering nomads, though his model does not imply the transportation and possible trade of such fragile material as pottery by the wandering tribes (Alizadeh 2006: 23, 51). Instead, he suggests that the motifs are symbolic representations connected to specific groups that may have become distributed over a wide area through various means of personal contact, including gift exchanges and exogamous marriage alliances. This would indeed allow for the production in one place of pottery with painted motifs of different origins.

[8] Altogether, more than 25,000 diagnostic fragments and vessels were recorded. Study of this material is just beginning, but it seems that (1) some chronological resolution can be reached, (2) the three assemblages differ significantly from one another, and (3) it will be possible to distinguish different kiln charges.

[9] A detailed program to analyze the local pottery sources and to match them with the pottery produced on Sites 91 and 73 is currently underway, and it will, we hope, prove this assumption.

oi.uchicago.edu

CONCLUSIONS

To conclude, the combined remote sensing, archaeological and geomorphological survey, and excavation program carried out in the small Bolāghi Plain within the framework of the Darre-ye Bolāghi Rescue Project has enabled the definition of a Bakun-period micro-landscape with (at least) six sites that were occupied during the Middle to Late Fars period. Of these six sites, five are located on the edges of the valley, and one on the river bank in the center of the plain. This latter site is the only one that can be characterized as a mound, perhaps more precisely as a mound without architecture, while the slope sites are all relatively flat. Of the four sites investigated, Site 91 is the oldest, dating to the Middle Fars 2 period, with the other three being Late Fars in date, indicating that there was possibly a marked increase in the number of sites during the Late Fars period.

Considering the distribution of the sites, with a mound at the center of the plain and flat sites on the slopes, it is tempting to reconstruct a two-tiered settlement hierarchy, or a functional differentiation in living versus specialized workshop sites. However, three of the four excavated sites (including the central mounded site) provided evidence for large-scale pottery production, so that a simple functional differentiation is not justified. Additionally, the burials encountered at the mound site and at one of the slope sites may be an argument that all sites represent domestic living sites.[10]

If we must decide whether the Darre-ye Bolāghi Bakun-period occupation should be considered a seasonal pastoralist one or a settled village way of life, the heavy emphasis on pottery production seems to contradict a mobile lifestyle. However, if the Zagros pastoralists of the fifth millennium B.C. are modeled according to modern ethnographic parallels, as people who migrate between summer and winter pastures with long intervals of quasi-sedentary life (Alizadeh 2006: 94), then their lifestyles during these periods would hardly differ from those of sedentary villagers, including a desire to furnish the household. This leaves us reliant on the above-mentioned markers of seasonality for such decisions. At the current stage of data processing, both a sedentary and a mobile population can be imagined.

A Final Word on Survey Data

Only two of the six Bakun-period sites in Darre-ye Bolāghi (Site 91, Site 119) had been recorded during the conventional archaeological surveying. A third (Site 73) was later recognized from surface finds. The largest site, Site 131, which might even have been a central place for the valley, had not been visible above ground at all and was only found through systematic coring. At Sites 64 and 76, historical and geological overlays had fully sealed the older remains.

The reconstruction of this Bakun-period micro-landscape therefore illustrates the potential of such intensive research in circumscribed settlement areas, and at the same time it illustrates the pitfalls of conventional surveying. Geological and historical events have shaped the surface of the land to an extent that potentially fully obscures the ancient sites. A conclusive reconstruction of prehistoric settlement patterns in the intermontane valleys of the Zagros is therefore impossible unless the quaternary landscape history of the area is understood. Thus, as plausible as the nomadic hypothesis is, it cannot be tested on the basis of survey data. The only way to approach the question remains excavation and systematic sampling of everything that can be indicative of lifestyle and seasonality.

ACKNOWLEDGMENTS

We gratefully acknowledge the support of the Iranian Cultural Heritage and Tourism Organization (ICHTO), with its former director Seyed Mohammad Beheshti and his successor Dr. Seyed Taha Hashemi, who generously granted permits. Scientific and logistical support is owed to Dr. Massoud Azarnoush, Director of the Archaeological Resarch Center of ICHTO, and to Dr. Mohammad Hassan Talebian, director of the Parseh-Pasargadae Research

[10] According to Alizadeh, pastoralists would rather bring their dead to open spaces (Alizadeh 2006: 96).

oi.uchicago.edu

Foundation (PPRF). Much logistical help came from the staff of the PPRF and from the engineers at the Sivand Dam hydroelectrical plant. Finally, we thank all members of our Iranian–German teams over the two seasons for their enthusiastic contribution to this work.

BIBLIOGRAPHY

Algaze, Guillermo

1989 "The Uruk Expansion: Cross-cultural Exchange in Early Mesopotamian Civilization." *Current Anthropology* 30: 571–608.

Alizadeh, Abbas

1985 "A Protoliterate Pottery Kiln from Choga Mish." *Iran* 23: 39–50.

1988a Mobile Pastoralism and the Societies in Highland Iran: The Evidence from Tell-i Bakun. Ph.D. dissertation, University of Chicago.

1988b "Socio-economic Complexity in Southwestern Iran during the Fifth and Fourth Millennia B.C.: The Evidence from Tell-i Bakun." *Iran* 26: 17–33.

1994 "Social and Economic Complexity and Administrative Technology in a Late Prehistoric Context." In *Archives before Writing* (Proceedings of the International Colloquium, Oriolo Romano, October 23–25, 1991), edited by P. Ferioli, E. Fiandra, G. G. Fissore, and M. Frangipane, pp. 35–58. Pubblicazioni del Centro Internazionale di Ricerche Archeologiche, Antropologiche e Storiche 1. Turin: Scriptorium.

2003 "Some Observations Based on the Nomadic Character of Fars Prehistoric Cultural Development." In *Yeki Bud, Yeki Nabud: Essays on the Archaeology of Iran in Honor of William M. Sumner,* edited by N. F. Miller and K. Abdi, pp. 83–97. Los Angeles: Cotsen Institute of Archaeology, University of California.

2004 "Wanderhirten: Ihre Bedeutung für die Kulturgeschichte Irans in geschichtlicher und vorgeschichtlicher Zeit." In *Persiens antike Pracht*, edited by T. Stöllner, R. Slotta, and A. Vatandoust, pp. 76–91. Bochum: Deutsches Bergbau-Museum.

2006 *The Origins of State Organizations in Prehistoric Highland Fars, Southern Iran: Excavations at Tall-e Bakun*. Oriental Institute Publications 128. Chicago: The Oriental Institute.

Askari Chaverdi, A., and P. Callieri

2006 "Tang-e Bolāghi, Sites No. 76 and 77: Settlements of the Protohistoric, Achaemenid and Post-Achaemenid Periods." In *Abstarcts* [sic]*: Symposium on the Archaeological Rescue Excavations in the Bolāghi Valley*, edited by M. Azarnoush, pp. 23–25. Tehran: Iranian Center for Archaeological Research.

Bernbeck, Reinhard; H. Fazeli; and Susan Pollock

2005 "Life in a Fifth-millennium B.C.E. Village: Excavations at Rahmatabad, Iran." *Near Eastern Archaeology* 68: 94–105.

Boroffka, N., and J. Becker

2004 "Töpferöfen in Arisman." In *Persiens antike Pracht*, edited by T. Stöllner, R. Slotta, and A. Vatandoust, pp. 218–21. Bochum: Deutsches Bergbau-Museum.

Childe, V. Gordon

1935 *New Light on the Most Ancient East: The Oriental Prelude to European Prehistory*. London: Kegan Paul, Trench, Trubner.

Egami, Namio, and S. Masuda, editors

1962 *Marv-Dasht*, Volume 1: *The Excavation at Tall-i Bakun 1956*. Tokyo University Iraq-Iran Archaeological Expedition 2. Tokyo: Yamakawa.

Forest, Jean-Daniel

1984a "2nd Season at Kheit Qasim-Himrin." *Sumer* 40: 64–67.

1984b "The French Excavations at Kheit Qasim, Himrin." *Sumer* 40: 107–14.

oi.uchicago.edu

Frankfort, Henri

1932 *Archaeology and the Sumerian Problem*. Studies in Ancient Oriental Civilization 4. Chicago: University of Chicago Press.

Goff, Claire L.

1963 "Excavations at Tall-i Nokhodi." *Iran* 1: 43–70.

1964 "Excavations at Tall-i Nokhodi, 1962." *Iran* 2: 41–52.

Hall, Henry R., and C. Leonard Woolley

1927 *Ur Excavations*, Volume 1: *Al-'Ubaid*. Oxford: Oxford University Press.

Hansen Streily, A.

2000 "Early Pottery Kilns in the Middle East." *Paléorient* 26: 69–82.

Henrickson, Elizabeth F.

1985 "The Early Development of Pastoralism in the Central Zagros Highlands (Luristan)." *Iranica Antiqua* 20: 1–42.

Herzfeld, Ernst

1929 "Prehistoric Persia I: A Neolithic Settlement at Persepolis: Remarkable New Discoveries." *Illustrated London News*, May 25, 1929.

Jasim, Sabah A.

1985 *The 'Ubaid Period in Iraq: Recent Excavations in the Hamrin Region*. British Archaeological Reports, International Series 267. Oxford: British Archaeological Reports.

Killick, R., and Michael Roaf

1979 "Excavations at Tell Madhhur." *Sumer* 35: 533–42.

Langsdorff, Alexander, and Donald E. McCown

1942 *Tall-i-Bakun A: Season of 1932*. Oriental Institute Publications 54. Chicago: University of Chicago Press.

Le Breton, L.

1957 "The Early Periods at Susa: Mesopotamian Relations." *Iraq* 19: 79–124.

Majidzadeh, Yousef

1976 The Early Prehistoric Cultures of the Central Plateau of Iran: An Archaeological History of Its Development during the Fifth and Fourth Millennia B.C. Ph.D. dissertation, University of Chicago.

Mashkour, Marjan

2003 "Tracing Ancient 'Nomads': Isotopic Research on the Origins of Vertical 'Transhumance' in the Zagros Region." *Nomadic Peoples* 7: 36–47.

2006a "Faunal Remains from Tol-e Nurabad and Tol-e Spid." In *The Mamasani Archaeological Project Stage One: A Report on the First Two Seasons of the ICAR-University of Sydney Expedition to the Mamasani District, Fars Province, Iran*, edited by D. T. Potts and K. Roustaie, pp. 135–46. Selsele Gozaresh-haye bastan shenasi 10. Tehran: Iranian Cultural Heritage and Tourism Organization.

2006b "Towards a Specialized Subsistence Economy in the Marv Dasht Plain: Preliminary Zooarchaeological Analysis of Tall-e Mushki, Tall-e Jari A and B, and Tall-e Bakun A and B." In *The Origins of State Organizations in Prehistoric Highland Fars, Southern Iran: Excavations at Tall-e Bakun*, edited by A. Alizadeh, pp. 101–05. Oriental Institute Publications 128. Chicago: The Oriental Institute.

Miller, Naomi F., and M. Kimiaie

2006 "Some Plant Remains from the 2004 Excavations of Tall-e Mushki, Tall-e Jari A and B, and Tall-e Bakun A and B." In *The Origins of State Organizations in Prehistoric Highland Fars, Southern Iran: Excavations at Tall-e Bakun*, edited by A. Alizadeh, pp. 107–18. Oriental Institute Publications 128. Chicago: The Oriental Institute.

Oates, Joan

1960 "Ur and Eridu, the Prehistory." *Iraq* 22: 32–50.

1983 "Ubaid Mesopotamia Reconsidered." In *The Hilly Flanks and Beyond: Essays on the Prehistory of Southwestern Asia Presented to Robert J. Braidwood, November l5, 1982*, edited by T. C. Young,

oi.uchicago.edu

P. E. L. Smith, and P. Mortensen, pp. 251–81. Studies in Ancient Oriental Civilization 36. Chicago: The Oriental Institute.

1993 "Trade and Power in the Fifth and Fourth Millennia B.C.: New Evidence from Northern Mesopotamia." *World Archaeology* 24: 403–22.

Petrie, Cameron A.; Lloyd R. Weeks; Daniel T. Potts; and K. Roustaei

2006 "Perspectives on the Cultural Sequence of Mamasani." In *The Mamasani Archaeological Project Stage One: A Report on the First Two Seasons of the ICAR-University of Sydney Expedition to the Mamasani District, Fars Province, Iran*, edited by D. T. Potts and K. Roustaie, pp. 169–96. Selsele Gozaresh-haye bastan shenasi 10. Tehran: Iranian Cultural Heritage and Tourism Organization.

Roaf, Michael

1989 "'Ubaid Social Organization and Social Activities as Seen from Tell Madhhur." In *Upon this Foundation: The 'Ubaid Reconsidered (*Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 91–146. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Rothman, Mitchell S., editor

2002 *Tepe Gawra: The Evolution of a Small, Prehistoric Center in Northern Iraq*. University Museum Monographs 112. Philadelphia: University of Pennsylvania, Museum of Archaeology and Anthropology.

Sami, Ali

1971 *Pasargadae*. Shiraz: Mousavi Printing Office.

Schmidt, Erich F.

1939 "Tol-e-Bakun: Prehistoric Mound near Persepolis." *Pennsylvania University Museum Bulletin* 71: 27–29.

Stein, M. Aurel

1936 "An Archaeological Tour in the Ancient Persis." *Iraq* 3: 112–225.

Stein, Gil J., and Rana Özbal

2007 "A Tale of Two *Oikumenai*: Variation in the Expansionary Dynamics of 'Ubaid and Uruk Mesopotamia." In *Settlement and Society: Essays Dedicated to Robert McCormick Adams*, edited by E. C. Stone, pp. 329–42. Ideas, Debates and Perspectives 3. Los Angeles: Cotsen Institute of Archaeology; Chicago: The Oriental Institute.

Sürenhagen, D.

1986 "The Dry Farming Belt: The Uruk Period and Subsequent Developments." In *The Origins of Cities in Dry-farming Syria and Mesopotamia in the Third Millennium B.C.*, edited by H. Weiss, pp. 7–44. Guilford: Four Quarters.

Tobler, Arthur J.

1950 *Excavations at Tepe Gawra*, Volume 2: *Levels IX–XX*. Publications of the Baghdad School, Excavations 1. Philadelphia: University of Pennsylvania Press.

Vanden Berghe, L.

1952 "Archaeologische opzoekingen in de Marv Dasht-vlakte (Iran)." *Jaarbericht ex Oriente Lux* 12: 212–20.

1954 "Archaeologische navorsingen in de omstreken von Persepolis." *Jaarbericht ex Oriente Lux* 13: 394–408.

Watson, Philip J.

1984 "Tell Madhhur: A Summary Report on the Excavations; The Small Finds from Tell Madhur." *Sumer* 43: 159–63.

Zagarell, A.

1982 *The Prehistory of the Northeast Bahtiyari Mountains, Iran: The Rise of a Highland Way of Life*. Beihefte zum Tübinger Atlas des Vorderen Orients, Reihe B 42. Wiesbaden: Ludwig Reichert.

oi.uchicago.edu

18

THE EMERGENCE OF UBAID STYLES AT TELL KURDU: A LOCAL PERSPECTIVE

RANA ÖZBAL, *Istanbul University*

INTRODUCTION

With occupation levels spanning the sixth and fifth millennia B.C., the site of Tell Kurdu offers the opportunity to diachronically investigate the emergence of Ubaid styles from the perspective of a single settlement. Instead of relying on cross-regional and comparative perspectives as is common in Near Eastern prehistory, this approach allows us to gain insight into the social context of cultural appropriation and to assess how a local community took part in this larger transformation.

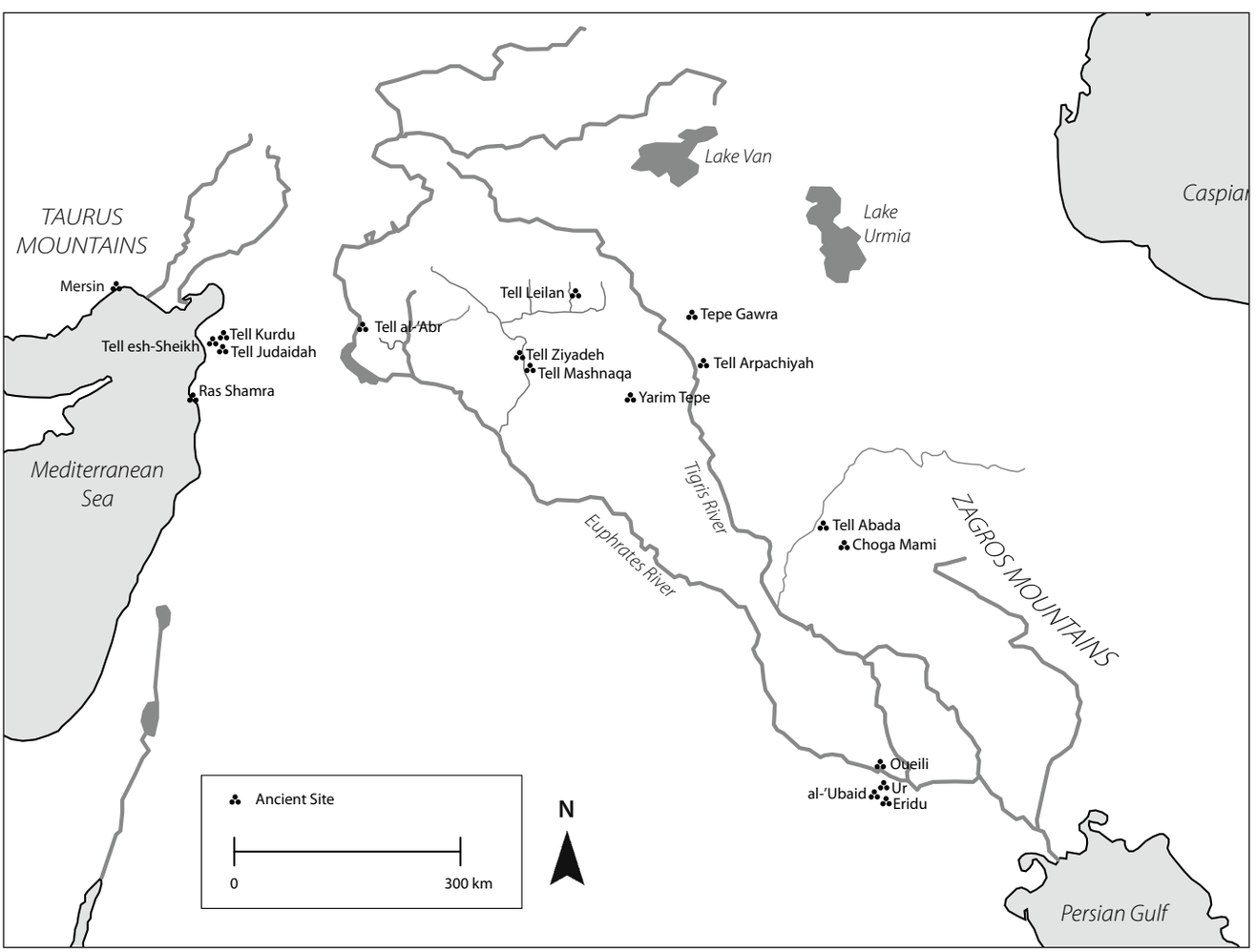


Figure 18.1. Map showing the locations of Tell Kurdu and other sites mentioned in text

oi.uchicago.edu

Tell Kurdu remained heavily local in character in the Amuq C phase of the sixth millennium when Halaf cultural materials and architectural elements became widespread across various north Mesopotamian settlements. The site was, however, strongly impacted by the transformations that were affecting northern Mesopotamia in the fifth millennium B.C. with the emergence and proliferation of Ubaid styles in the Amuq E phase. Effects of these changes — evidenced in the ceramics, the figurines, the burial practices, the craft facilities, and in architectural styles — are considered below in light of ancient-DNA evidence from a series of nine burials spanning both the Halaf- and Ubaid-related phases. While the artifactual data clearly indicate that Tell Kurdu was intensely involved in cross-cultural contacts in the Ubaid period, the DNA nonetheless suggests continuity in the Tell Kurdu population.

THE SITE AND THE LOCAL CHRONOLOGY

Located in the Amuq Valley of the Hatay province in southern Turkey (fig. 18.1), Tell Kurdu was occupied in the sixth and fifth millennia B.C. Following brief excavations at the site in 1938, Robert and Linda Braidwood (1960) identified three separate phases and thus placed the ceramic assemblages from the mound within local relative chronologies. In terms of their general chronology for the Amuq Valley, these phases were designated Amuq C, D, and E.

The material culture from the earliest level identified at Tell Kurdu, assigned to the Amuq C phase, is largely local in style. However, the ceramic repertoire shows parallels with developments that were taking place at Halaf-period sites to the east. Detailed excavations of the upper strata of the Amuq C phase were conducted in 2001 (Özbal et al. 2004). Based on a set of sixteen radiocarbon dates, these levels can be confidently placed between the beginning of the sixth millennium B.C. and circa 5800 cal. B.C. (Gerritsen and Özbal 2004; Özbal 2006). Material dating to this phase occurs over the entire surface of the mound, and the site may have reached its maximum size of approximately 15 ha at this time, but this could not be ascertained.

The following Amuq D phase has often been described as an interim period or a Halaf–Ubaid transition phase, with local versions of Halaf-style ceramics continuing alongside the appearance of Ubaid-like shapes and styles. This period remains the least understood phase at Tell Kurdu because intact architectural levels have not yet been excavated. Therefore, little can yet be said on the place of Amuq D within larger cultural trends, although red-washed ceramics with links to material from both northern Syria and Palestine (Leenders 1989; Wright 1951) are not uncommon during this transitional phase (Braidwood and Braidwood 1960: 510).

The Amuq E phase, roughly contemporary with the Ubaid 3, follows.[1] In this phase the ceramic repertoire and other lines of evidence have an unmistakably Ubaid character. The Amuq E settlement is found over an area of no more than 8 ha located in the southern part of the site,[2] which suggests that there was an overall drop in the settlement size at this time. A look at the archaeological data from Tell Kurdu clearly indicates varied involvement with the larger, supra-regional cultural complexes such as the Halaf or Ubaid throughout the various above-listed phases. Painted pottery styles with Halaf-like motifs and shapes appear in small numbers among the Amuq C ceramic repertoire. While often distinctly Halaf in their overall styles, one cannot equate them directly with standard Halaf wares. When a strict definition is followed, only a very small percentage can confidently be identified as Halaf (Braidwood and Braidwood 1960: 508). The Amuq C phase is characterized by local styles that dominate not only the ceramics but also the architecture and small finds. Halaf ceramic motifs, shapes, and styles are amalgamated with local forms and surface treatments (Özbal 2006).

However, a millennium later, the situation for the Amuq E phase and the relationship with the Ubaid cultures of Mesopotamia is distinctly different. As noted by the Braidwoods, "the Amuq now seems to be part of an intensi-

[1] The radiocarbon results from Tell Kurdu indicate that the latest excavated Amuq E levels date to the beginning of the fifth millennium, to around 4800 cal. B.C. (Edens and Yener 2000: 203). This is relatively early in the northern Ubaid horizon (Campbell 2007). The initial Ubaid-related occupation at Tell Kurdu is likely to have been even earlier because, as of yet, no absolute dates exist for the "Early Amuq E" assemblage, exposed in Trenches 14, 1, 6, and 9, which presumably predates this timeframe (Yener et al. 2000a: 39–43; Yener et al. 2000b: 204–07). One should note, however, that while considered early for the northern Ubaid, the dates from Kurdu still do not approach those from the lower levels of some Syrian Ubaid sites like Tell al-'Abr (Hammade and Yamazaki 2006: 431) and Mashnaqa (Thuesen 2000: 73) and postdate estimates for the Ubaid 3 based on southern Mesopotamian chronologies (Valladas, Evin, and Arnold 1996: 383; Evin 1995).

[2] The only Amuq E remains occurring on the northern part of the mound are a series of Ubaid-related burials, suggesting this area was used as a cemetery in the fifth millennium.

oi.uchicago.edu

fied *oikoumenê*" (1960: 512). During this phase we see a much stronger involvement with northern Mesopotamia, not only in the ceramics, which show far closer resemblances with northern Ubaid assemblages than their Halaf/Amuq C counterparts, but also in the small finds, architecture, and burial practices. Using Tell Kurdu as the single case study, this article describes the chronological changes we see at this site from a local perspective and evaluates the changing levels of "involvement" the Kurdu inhabitants show with larger spheres of interaction. If the variability is defined as "a degree of participation," then it may reflect the level of trade or contact with cultures to the east, as well as local attitudes.

THE AMUQ C PHASE AT TELL KURDU

Excavations of the Amuq C levels at Tell Kurdu indicate that although the sixth-millennium B.C. inhabitants were well aware of the supra-regional developments that affected the Halaf world, they remained committed to local Amuq styles (Özbal et al. 2004; Yener et al. 2000a). Local ceramics, including burnished and unburnished wares, dominate over 90 percent of the assemblage. Standard in this period are the thin-walled, dark-faced, unburnished cooking wares with internally thickened (or splayed) rims. This characteristic shape typifies the Amuq ceramic assemblages for several millennia (Amuq B–D periods; fig. 18.2). The absence of unburnished, splayed-rimmed vessels from regions far beyond the Amuq Valley and the northern Levant suggests that both the shape and the ware are local.

In addition to this characteristically local assemblage, we do at this time find painted ceramics (some with classic Halaf designs and others with local variants thereof) making up nearly 6 percent of the total ceramics (by count. If only rims are considered this value is around 15%; see Diebold 2004: 86; Özbal 2006: 87). This value can hardly compare with contemporaneous sites in northern Syria or Iraq, where it is not uncommon to have 40 percent of the assemblage painted (Campbell 1992: 61; e.g., Davidson 1977: 108; Hijjara 1997: 68; Le Mière and Nieuwenhuyse 1996: 176; Merpert and Munchaev 1993c: 152). If the percentage of painted pottery and the appropriation of Halaf vessel forms can be viewed as indicators of "Halafness," then the low percentages recorded at Tell Kurdu suggest relatively little involvement with larger Halaf interaction networks during the sixth millennium B.C. Davidson notes that the painted ceramics and range of designs found at Tell Kurdu appear "much more restricted" than at sites he believes represent the "true" Halaf tradition (1977: 269).

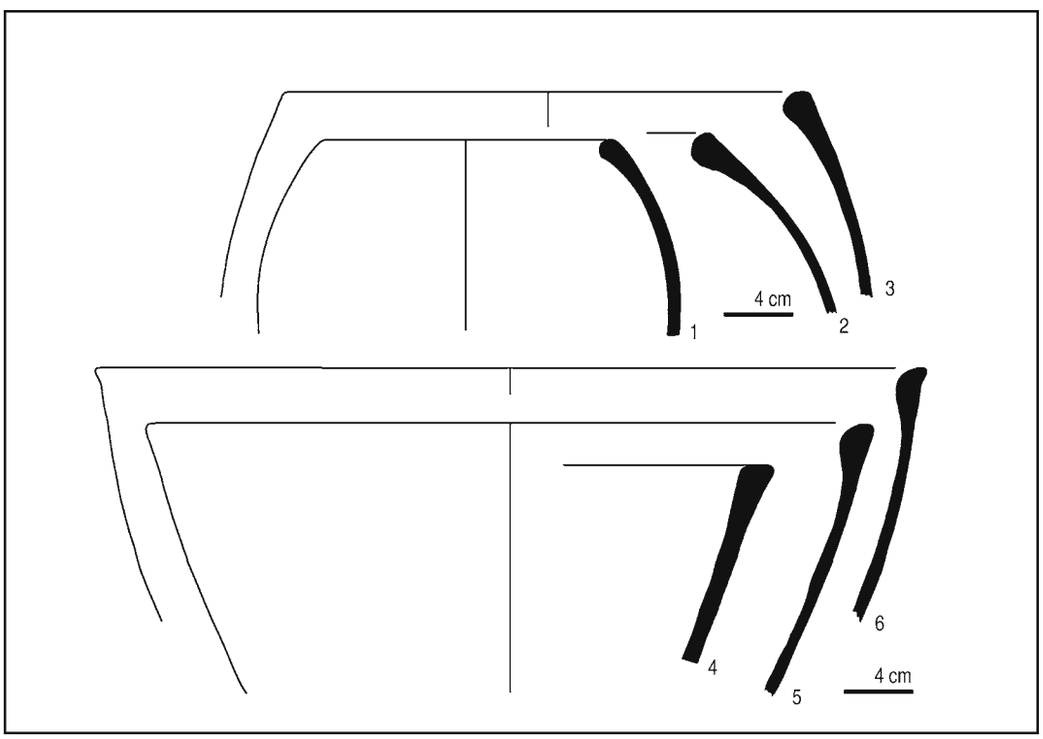


Figure 18.2. Examples of dark-faced, unburnished ware, splayed- (thickened-) rim vessels from the Amuq C phase at Tell Kurdu

oi.uchicago.edu

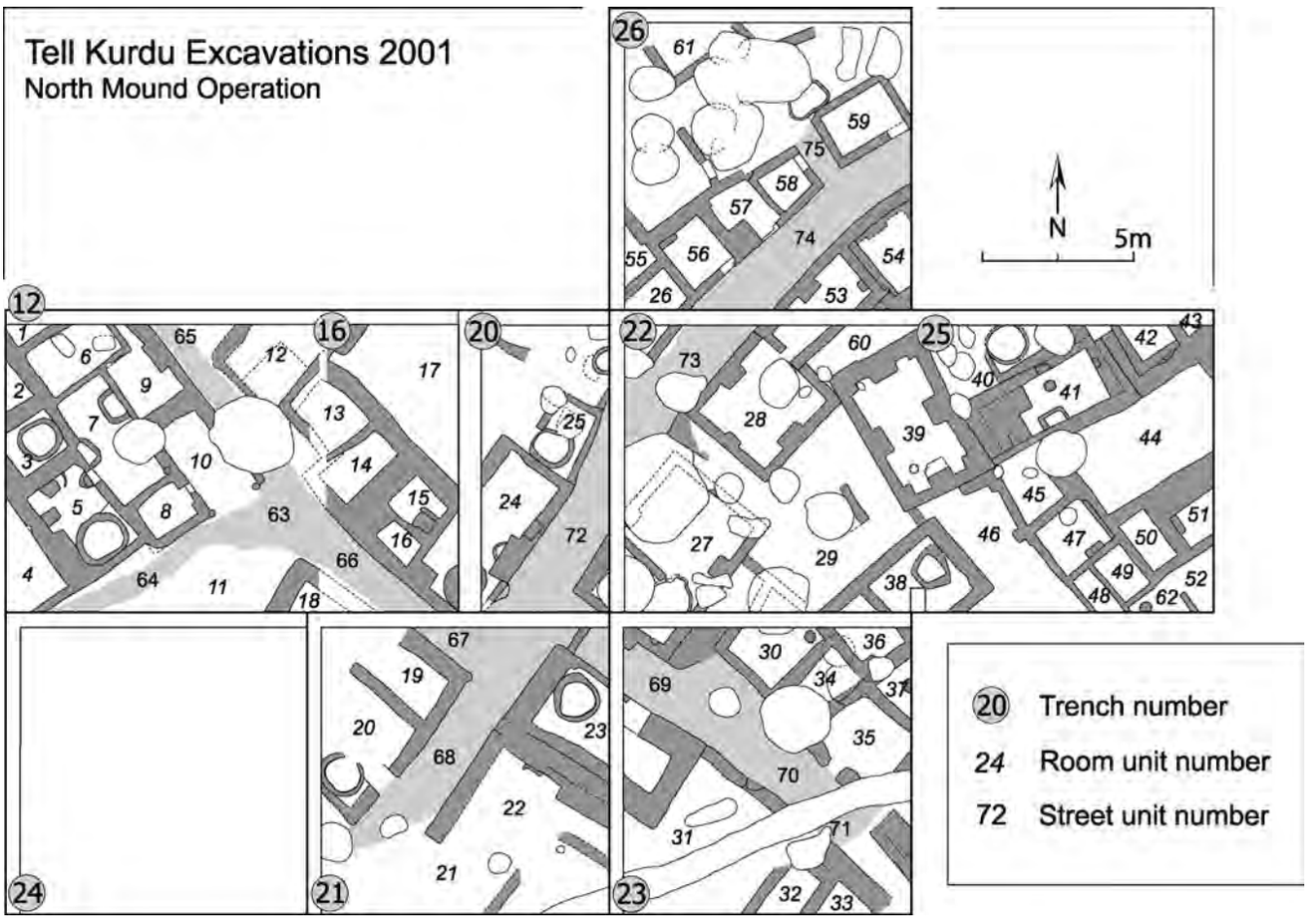


Figure 18.3. Overview of the excavated area in the northern part of Tell Kurdu in 2001, dating to the Amuq C phase

Figurines, often seen as distinctly Halaf, are nearly absent from Tell Kurdu (Gerritsen 2004).[3] Moreover, the inhabitants appear to have preferred rectangular architecture to the classic Halaf-type tholoi (Özbal, Gerritsen, and Yener 2003; Özbal and Gerritsen 2004; Özbal 2006). Excavations in 2001 yielded over 700 sq. m of intact architecture (fig. 18.3). The tightly clustered structures along streets and alleyways demonstrate a layout that is quite different from the less dense arrangement of round buildings that is documented at many Halaf sites. If architecture is viewed as the physical embodiment of the ways in which people order their worlds (Parker Pearson and Richards 1994), then we might reasonably suggest that the inhabitants of Tell Kurdu conceptualized space within their settlement in a way that was different from that posited for Halaf communities to the east. Nor, in all probability, had they adopted a semi-nomadic lifestyle of the kind that has been suggested for some Halaf communities (e.g., Akkermans and Duistermaat 1997; Bernbeck and Pollock 2003). No earlier architectural levels have yet been uncovered at Tell Kurdu, but the fact that rectangular buildings appear in earlier levels at Tell Judaidah (Braidwood and Braidwood 1960), Ras Shamra (de Contenson 1992), and Mersin (Garstang 1953) suggests that this may represent a regional style.[4] This would point to a preference — at least in the excavated levels — for local architectural styles and the associated spatial orders.

In terms of burials, the Amuq C levels at Tell Kurdu show considerable variability (Gerritsen and Sholts 2004). Our excavations yielded adult, sub-adult, and infant burials associated with the architecture during the main phase or immediately thereafter. Some were simple inhumations placed beneath floors of rooms or in courtyard/street locations (12:81;

[3] Although not a strict rule, figurines tend to be less common in the earlier phases of the Halaf period and become more widespread by the final phases. There are undoubtedly many factors accounting for the paucity of figurines at Tell Kurdu, but given its proximity to north Mesopotamia, chronological issues may explain part of this situation. (E. Belcher, pers. comm.).

[4] It is also possible that the earlier levels of Tell esh-Sheikh yielded rectangular architecture during the 1947 excavation season, but since the results still await publication, the data cannot be used to support or contradict the proposed claims (see Perkins 1950: 64).

oi.uchicago.edu

22:2; 25:80); at least one of the burials was missing a skull (12:14),[5] one was a cremation (25:8),[6] and several were jar burials of infants (12:12; 26:12; 24:16). Most notable is the fact that burials of both adults and children are located within the settlement proper, although the number of people buried cannot account for the whole population. The variability is consistent with the practices we see during the Halaf period (Akkermans 1989, 1993: 306–18), but cremations, skull/headless burials, and intra- and extra-mural inhumations are not uncommon in both earlier and contemporaneous settlements in Cilicia and central Anatolia as well.

These observations collectively imply that the sixth-millennium inhabitants of Tell Kurdu were conscious of Halaf styles, as indicated by the north Mesopotamian ceramic motifs and shapes they incorporated in their pottery and possibly by the variability they displayed in their burial methods. However, the adherence to local styles in their architecture and the bulk of their ceramics, as demonstrated by the low percentages of Halaf-like wares, may suggest that they had reservations about partaking fully in the larger style horizon.

THE AMUQ E PHASE AT TELL KURDU

In the subsequent millennium, we find a notable transformation in attitudes toward regional styles at Tell Kurdu, and the settlement begins to resemble closely its contemporary counterparts in north Mesopotamia. Thus parallels with elements of material culture generally seen as characteristic of the "northern Ubaid" are visible in the ceramics, architecture, figurines, and burial practices. These are documented in detail below.

THE CERAMICS

Ubaid-related painted pottery of Amuq phase E at Tell Kurdu includes both monochrome and bichrome variants in which the paint is frequently applied using a multiple-brush technique (Braidwood 1939; Diebold 2000; fig. 18.4). At present, only an overall figure for the percentage of painted sherds can be given. Preliminary results indicate that 45 percent of all rim sherds bore painted decoration (Diebold 2000).[7] Although the ceramic designs show good parallels with Hammam et-Turkman IVA, the percentage of painted wares at Tell Kurdu exceeds significantly the figure of 17.6 percent reported from the former site (Akkermans 1988). Akkermans (1988: 218) suggested that this relatively low percentage might mean that the inhabitants of Hammam et-Turkman "adopted external (i.e., northern Ubaid) elements on a limited scale" during this phase.[8]

Given that nearly half the Amuq E ceramics at Tell Kurdu are painted, it is reasonable to suggest that the inhabitants of the Amuq E phase embraced Ubaid styles at least in their pottery. The Braidwoods viewed the ceramics of this phase as showing "an overwhelmingly Ubaid complexion" (Braidwood and Braidwood 1960: 511). The near disappearance of characteristic local, unburnished, thick-lipped cooking wares (fig. 18.2), which had been part of the local assemblage since the Amuq B period, as well as the evident decline in classic dark-faced burnished wares, are perhaps the best indicators that by the Amuq E period local elements were being replaced by new material show-

[5] This may suggest that the skull was treated and buried separately, as was practiced during the Halaf period (Akkermans 1993: 311; Hijjara 1978; Merpert and Munchaev 1993a: 217). But it cannot go without mention that excavations could not determine whether the missing skull was intentional or whether it had been removed by recent plowing (Yener et al. 2000a: 43).

[6] Another cremation was found in the Amuq C levels excavated in 1998 (Yener et al. 2000b: 209). Cremations from the sixth millennium are known from Mersin (Garstang 1953: 101) and Yarim Tepe II (Merpert and Munchaev 1993a: 212).

[7] This value holds for two different trenches excavated in 1999, namely, trench 14 (earlier) and trenches 11/15 (slightly later). The stratigraphic relationship between these phases requires further investigation. There appears to be a general decline in the percentage of painted pottery at most northern Ubaid sites through time (Akkermans 1988; Arzt 2001; Hammade and Koike 1992; Thuesen 2000: 74–75). Future excavation of multiple occupational phases within the Amuq E sequence at Tell Kurdu should be able to clarify the fluctuations in the percentage of painted pottery across the different Ubaid phases (Diebold 2000: 60).

[8] In comparison to the earlier phases of other northern Ubaid sites, when percentages of painted ceramics are usually at their highest, the value recorded at Tell Kurdu is comparable to (or higher than) levels 1–2 at Tell Ziyadeh at 43 percent (Arzt 2001: fig. 2.1), Tell Leilan 58–61 at 37.7 percent (Schwartz 1988), and strata I–III at Tell Mashnaqa at 31.6 percent (Thuesen 2000: 74). Radiocarbon dates from Tell Kurdu, however, may correspond with a slightly later level (at least for Mashnaqa) during which a decline in the percentage of painted pottery has been observed. The Kurdu values do not approach those documented at Tell al-'Abr levels 6–7, which exceed 90 percent (Hammade and Koike 1992; Hammade and Yamazaki 2006: 61), but because this is calculated as a percentage of all diagnostic sherds (and not rims alone), it is difficult to make a direct comparison.

oi.uchicago.edu

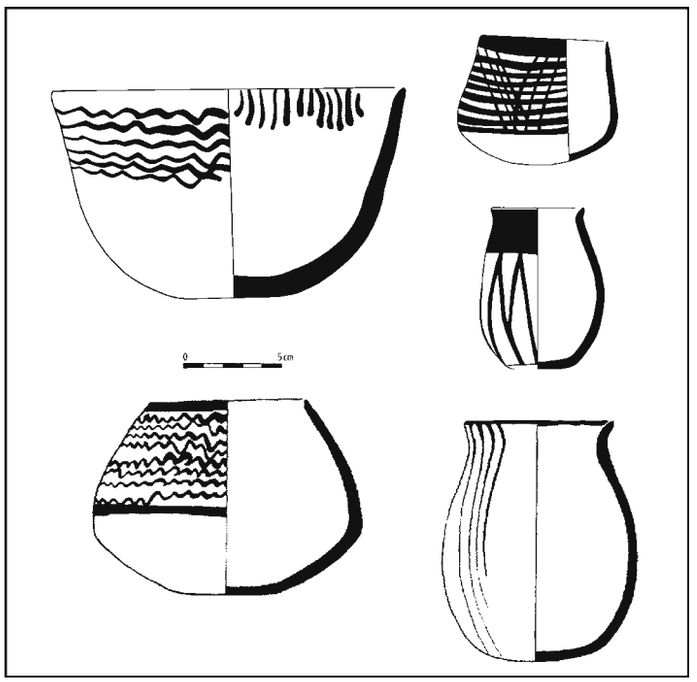


Figure 18.4. Examples of Ubaid-related painted vessels from the Amuq E phase at Tell Kurdu

ing eastern connections (Braidwood and Braidwood 1960: 512; Diebold 2000: 65).

THE ARCHITECTURE

The Amuq E excavations at Tell Kurdu have, to date, yielded no tripartite structures, an architectural form often considered a hallmark of the Ubaid period. However, a grill structure, identical in many respects to those from northern Ubaid sites such as Tell Ziyadeh level 1 (Arzt 2001: fig. 2.1; Hole 2008: fig. 3), Tepe Gawra levels XV, XVA, and XVI (Tobler 1950: pls. 15–17), and Tell al-'Abr level 7 (Hammade and Koike 1992: fig.12; Hammade and Yamazaki 2006), is of interest (fig. 18.5). The spaces between the grills are narrow and would have made very awkward work areas, and so such structures are often interpreted as granaries (Akkermans and Schwartz 2003: 166; Artz 2001: 35; Hammade and Koike 1992: 122–23; Hammade and Yamazaki 2006: 25; Tobler 1950: 39). Discussing similar structures at 'Oueili, Forest (1991: 95–96) argues that the raised floors would have served to keep the grain dry.

If grain storage was the function of the grill building at Tell Kurdu, then the size of the building (10 × 9 m) might suggest that it served as a communal repository. The discovery of a deposit of seals, tokens, and bale tags in the vicinity of this structure has been interpreted as evidence for administrative devices used for the collection or distribution of the stored products (Akkermans and Schwartz 2003: 163; Edens and Yener 2000: 205–06). Overall the data indicate, as for other Ubaid settlements (e.g., Stein 1994), not only that the storage of grain and other products was important to the people living at Tell Kurdu, but also that they used storage structures that were built according to a supra-regional design.

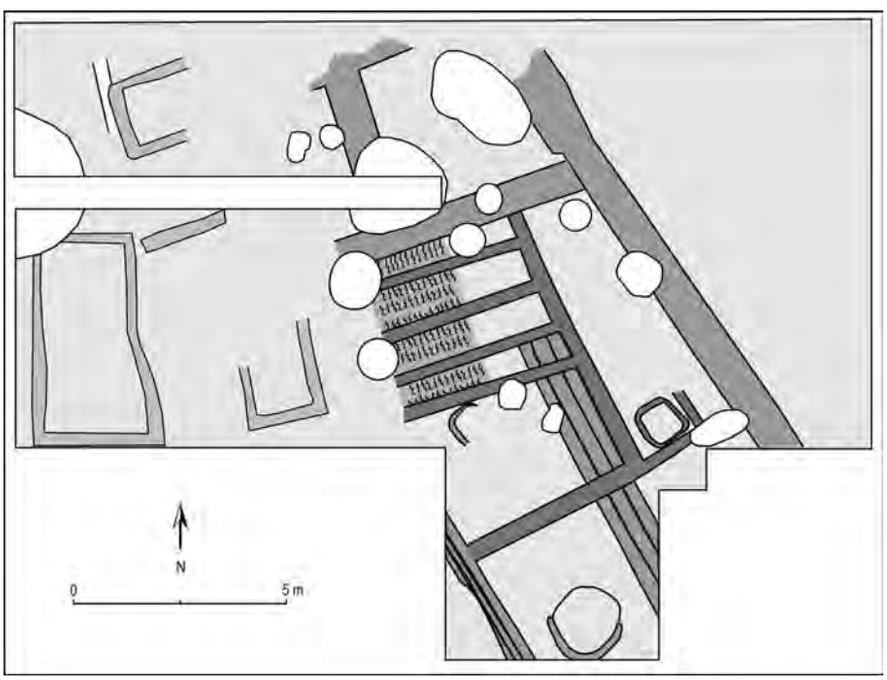


Figure 18.5. Plan of the Amuq E–phase grill structure exposed at Tell Kurdu in trenches 1, 6, and 9 in 1998 (after Yener et al. 2000b: fig. 24)

oi.uchicago.edu

THE FIGURINES AND SMALL FINDS

To date, no artifacts that could be confidently called Ubaid clay sickles or mullers have been recovered from Tell Kurdu, but several cone-like objects of clay were found (Edens and Yener 2000: fig. 23:13). The current excavators have interpreted these as elongated tokens (Yener 2000a: 68), although similar objects from the 1930s excavations were then termed "nails" (Braidwood and Braidwood 1960: fig. 160:18).

As far as small finds are concerned, the most striking similarity with what might be deemed "classic" Ubaid sites are the figurines from Tell Kurdu. Although almost completely absent from the Amuq C levels at Kurdu (Gerritsen 2004), figurines were recovered from the Amuq E levels, and they included at least two examples (and possibly a third) with conical heads and coffee-bean eyes (Edens and Yener 2000: 202; Yener 2000b: fig. 3.3, 2001: fig. 12; Yener et al. 2000a: fig. 17.1; also fig. 18.6 herein). The similarities that these figurines show with the familiar Ubaid-period examples from Eridu (Safar, Mustafa, and Lloyd 1981: fig. 115A and B) and Ur (Woolley 1955: pl. 20), as well those from earlier sites such as Choga Mami (Oates 1969: pl. 27) and Yarım Tepe I (Merpert and Munchaev 1993b: 92, fig. 6.10.1), are striking.

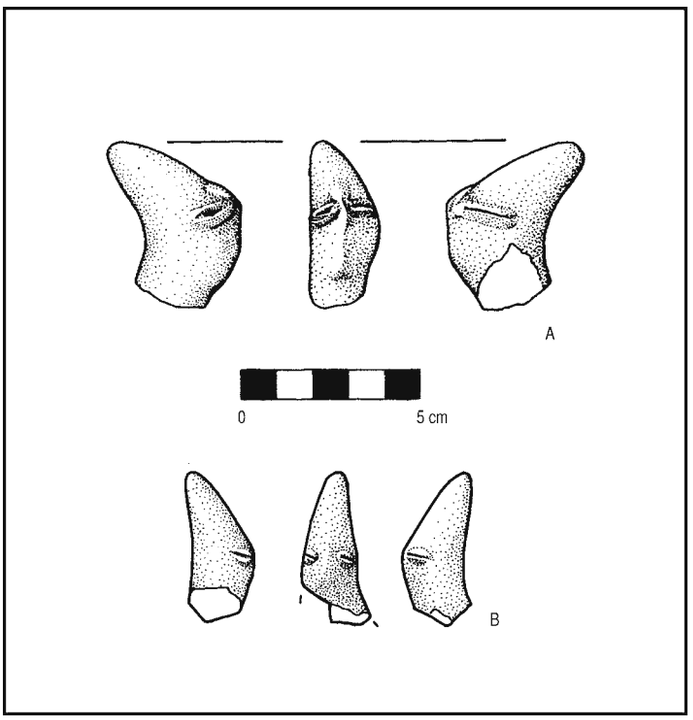


Figure 18.6. Human figurines with conical heads from the Amuq E phase at Tell Kurdu: (*a*) after Yener et al. 2000b: fig. 22.1 and (*b*) after Yener et al. 2000a: fig. 17.1

The suggestion that the distinct elongated figurine head shape may actually represent intentional cranial deformation is significant because it may refer to a widespread cultural tradition (Downs 1984; Molleson and Campbell 1995; Özbek 2001; Şenyürek and Tunakan 1951; see also Lorentz this volume). Although the sample sizes were small, analysis of the human skeletal remains from Tell Kurdu[9] by Kirsi Lorentz yielded no evidence for intentionally deformed skulls. However, the practice of cranial deformation is known from the Ubaid-related levels at the nearby Amuq site of Tell esh-Sheikh (Şenyürek and Tunakan 1951), raising the possibility that the conical figurines from Tell Kurdu may indicate an awareness of the wider tradition of headshaping. Regardless, the strength of the parallels between the figurines from Tell Kurdu and those documented at Ubaid sites elsewhere suggests that the inhabitants had contacts which rendered them aware of region-wide trends.

THE BURIALS

For the Amuq C phase dating to the sixth millennium, the recent excavations suggest that it was not uncommon to bury babies, adults, and adolescents alike beneath the floors of houses or within the main residential quarter (Gerritsen and Sholts 2004). While these burials can by no means account for the entire sixth-millennium population, they still provide a useful data set for comparison with the burials from the subsequent Amuq E phase.

It is clear that by the latter period, significant changes had taken place in beliefs about the afterlife and ideas regarding the proper disposal of the dead. Although the architectural exposures dating to the Amuq E phase are comparable in area to those unearthed by the Amuq C excavations, to date no burials have been found in clear association with Amuq E architecture. Instead, all five interments that could confidently be identified as belonging to the Amuq E phase (as well as several other burials that are probably of Amuq E date but lack datable burial gifts) were

[9] At the time of writing, all skeletal remains from Tell Kurdu, with the exception of those uncovered in the 1998 season, were under analysis by Dr. Lorentz.

oi.uchicago.edu

located in burial pits cutting into the earlier Amuq C architecture, in the then-uninhabited northern part of the site. These interments would have been located at some distance from the residential area of the Amuq E settlement.

Referred to as "the Ubaid cemetery" (Yener et al. 2000b: 210), the segregation we note between the settlement and the burial ground during the fifth millennium at Tell Kurdu appears to represent a move from graves confined within homes or occupational quarters to the use of more public and communal cemeteries. This change in the placement of the dead not only represents profound changes in local beliefs, but also parallels transformations that were going on across northern Mesopotamia in the Ubaid period (Akkermans 1989; Forest 1983; Hole 1989; Mallowan and Rose 1935; Pollock 1999: 199–200; Thuesen 1996; Woolley 1955; Wright and Pollock 1987). Thus, the residents of Tell Kurdu had by this time begun to adopt elements of mortuary practices that were widely accepted across the larger region.

CRAFT PRODUCTION

The 1999 season at Tell Kurdu yielded what appeared to be a semi-enclosed compound containing a series of pyrotechnic installations (Yener et al. 2000a: fig. 3; fig. 18.7 herein). Given the presence of "overfired potsherds" and the fact that the walls and floors of the structures were "completely vitrified into ceramic slag" (Casana 2000: 55), there is little doubt that this represented kiln facilities connected to ceramic production.

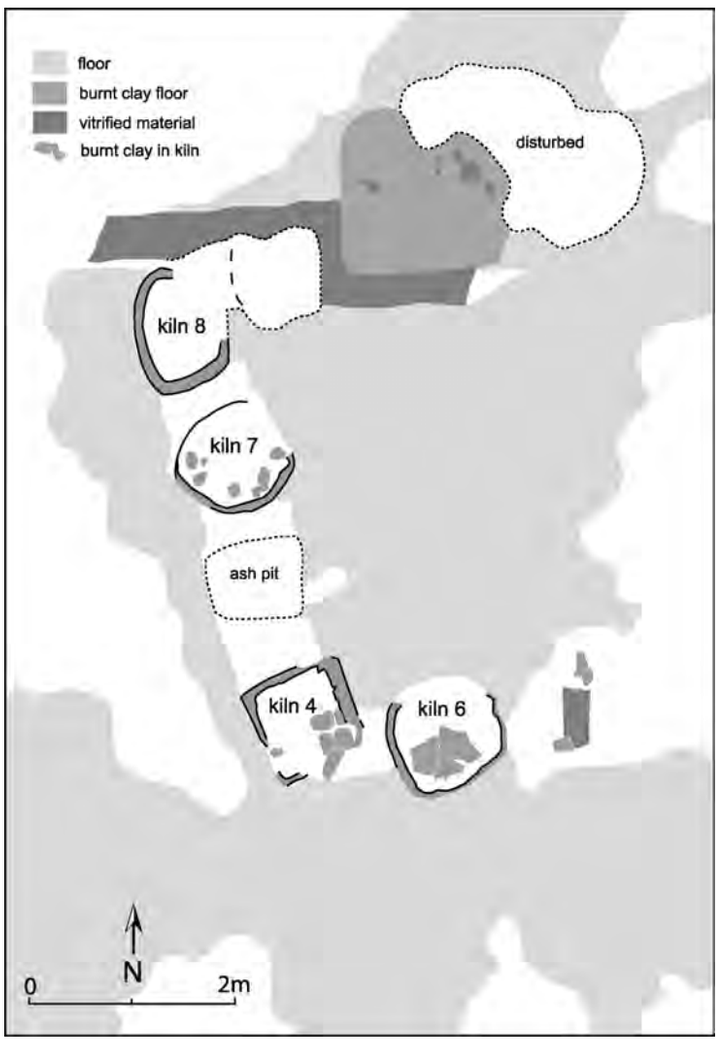


Figure 18.7. Plan of the Amuq E–phase kiln complex exposed in trenches 11 and 15 in 1999 (after Yener et al. 2000a: fig. 3)

oi.uchicago.edu

On the evidence of standardization in form and decoration, some have seen the Ubaid as a period of technological development and have suggested that it witnessed the emergence of specialized ceramic production and the first "professional potters" (Nissen 1988: 47, 1989). Such specialization would have led to the production of ceramics in workshop settings. In this respect, the discovery of an area dedicated to pottery production in the Amuq E levels at Tell Kurdu is consistent with the developments that might have been expected in light of the technological developments documented by the ceramics. Ubaid-period ceramic kilns are known from Tell Abada (Jasim 1985: 53–54), Tell al-'Abr (Hammade and Yamazaki 1995, 2006: pl. 4.2), Tell Ziyadeh (Buccellati, Bula, and Reimer 1991; Akkermans and Schwartz 2003: 170–71; but see Hole 2008), Kosak Shamali (Koizumi and Sudo 2001: 120–22), and possibly al-'Ubaid and Eridu (Moore 2002). The discovery of such facilities in the Amuq E levels might indicate that developments at Tell Kurdu could be seen as the local manifestation of a supra-regional set of developments that were taking place with respect to the growing specialization of ceramic production (Casana 2000: 55–58; Yener et al. 2000a: 36–38).

A cross-cultural compilation of ethnographic data worldwide suggests that in most societies women tend to be the primary producers of pottery (Costin 1991, 1996: table 4.1), but a change in the mode of production is often equated with the reshuffling of gender roles associated with household tasks and craft activities (Adams 1989: 445–46). Though based on tenuous ground, men are assumed to take over the production of pottery when it becomes a full-time specialization (Rice 1987: 188).

While the presence of a specialized workshop at Tell Kurdu might suggest that ceramic production had moved from domestic settings to a large-scale operation, there is at present no evidence to indicate that pottery at Tell Kurdu was being made by "attached specialists" under any form of administrative control. Similarly, the chemical characterization of Ubaid ceramics from southwestern Iran allowed Berman (1994) to argue that vessels there were produced in small independent workshops and not in central locations under a chiefly administration. In other words, both case studies challenge any assumption that ceramics at this time were made by full-time specialists, implying that this was probably not a male-dominated activity.

This observation is in line with Robert Adams' idea that women were the primary producers of ceramics in the Ubaid period (1989: 445). Given the continuity in motifs and styles and the "prolific employment of designs," Adams further speculates that Ubaid communities were matrilineal or matrilocal (1989: 446). One suggestion that he makes, and to which this paper returns in the following section, is that the analysis of DNA might be used to test this hypothesis, in particular mitochondrial DNA, which is inherited through the female line (Adams 1989: 450).

LOCAL GENETIC CONTINUITY AND THE UBAID "EXPANSION"

Several competing arguments have been proposed for the appearance of Ubaid material culture in north Mesopotamia. These include models based upon warfare and invasion (Mallowan and Rose 1935), the gradual adoption of a dominant and superior culture (Breniquet 1996), migration as a result of climatic factors (Hole 1994), and colonial expansion motivated by a desire to obtain raw materials (Oates 1993, 2004).

The value of using skeletal studies or ancient DNA to determine the presence of hereditary traits to assess the genetic makeup and to ultimately address issues of migration and/or continuity of Ubaid populations has been recognized for some time (Adams 1989; Molleson and Campbell 1995; Thuesen 1996: 51). Yet the analyses carried out in this respect have been limited. Before the results of the DNA analyses from Tell Kurdu as reported by Nitzan Mekel-Bobrov and Bruce T. Lahn are presented below, I discuss two studies that used DNA or other lines of skeletal evidence to suggest the possibility of genetic links between Halaf and Ubaid populations.

The first is a study by Molleson and Campbell, who reanalyzed eleven skulls brought to Britain by Max Mallowan following his 1933 excavation season at Tell Arpachiyah. Based on traits such as hypodontia and extra-sutural ossicles, Molleson and Campbell (1995) argue that the individuals represented were genetically related. Hypodontia is a condition that is characterized by individuals having fewer teeth than is considered normal. Often, as in the case of the population of Arpachiyah, individuals with this condition lack the third molar (commonly known as "wisdom teeth"). When combined with the presence of unusually small or large teeth, which are also hereditary traits, the study of dentition can be remarkably informative on issues of genetic relatedness. The presence of extra-sutural bones in the sutures of the cranium is also hereditary. The discovery that these very traits were found in members of the population of Arpachiyah during both the Halaf and Ubaid periods led the researchers to raise the possibility of

oi.uchicago.edu

genetic continuity between these two populations. While the small sample sizes prevented Molleson and Campbell from generalizing from this case, it raises interesting questions regarding the mechanisms of the so-called Ubaid cultural expansion.

Thuesen (1996) pioneered the use of ancient DNA (aDNA) analysis in Ubaid archaeology with a study of twenty-five burials from Tell Mashnaqa at the Khabur River. In this part of north Mesopotamia, where migration from the south during the Ubaid period was a distinct possibility (e.g., Hole 1997), the rationale for aDNA research was clear. While the results were inconclusive (Thuesen 1996: 51), the relevance of aDNA work to the issue of the region-wide dissemination of Ubaid traits was clear.[10]

In the case of Tell Kurdu, the rationale for aDNA analysis was quite different because, geographically, the site lies near the western edge of the distribution of Ubaid styles. Rather than attempting to make claims about Ubaid society as a whole, the data from Tell Kurdu aDNA should allow us to gain insights into the genetic characteristics of the local population at different times, and thus to assess the extent of any relationship between changes in material culture and changes in population. This "bottom-up" approach seeks to understand developments in individual regions before addressing the more general issues of the mechanisms through which Ubaid-type material was distributed. Connected to this is a critique of the implicit assumption that any one mechanism can explain the complex processes behind the appearance of Ubaid materials in the north; there is undoubtedly a range of different factors involved in this process. This is precisely why the examination of individual sites or sub-regions in detail is critical in order to understand local developments resulting from the incorporation of elements of Ubaid material culture.

The aDNA studies conducted by Nitzan Mekel-Bobrov and Bruce T. Lahn (2004) on the Amuq C and E burials provide important insights into local understandings of the sixth and fifth millennia at Tell Kurdu (table 18.1). Fourteen skeletons spanning both the Halaf-related and Ubaid-related phases of the site were analyzed with the aim of achieving two results: sexing and determining mitochondrial DNA sequences (Mekel-Bobrov and Lahn 2004: 72–73). Molecular sexing was achieved through the amplification of the amelogenin gene, and sex was determined based on the presence either of two X chromosomes (female) or one X and one Y chromosome (male). This process proved successful in nine of the cases under study (Mekel-Bobrov and Lahn 2004: 73). When comparative assessment was possible, the results matched the sexing data obtained from the morphological analysis of the skeletons (Lorentz n.d.). A second objective in the analyses was to assess the amount of genetic diversity across different individuals by obtaining the mitochondrial DNA (mtDNA) haplotypes. Because the burials analyzed can be placed in both chronological and spatial contexts, these data may provide insights into the levels of relatedness. The success rate was high as the mtDNA test provided positive results for eleven of the fourteen individuals analyzed (i.e., 78%; see Mekel-Bobrov and Lahn 2004: 91). These results, however, should be considered preliminary.[11]

Being inherited exclusively from the mother, mtDNA provides a means to assess the level of the relatedness between individuals, even over several generations. Four of the burials for which we have mtDNA data were unquestionably Amuq C in date, while two could be securely dated to the Amuq E phase. Although the two phases in question are close to a millennium apart (as confirmed by our radiocarbon dates), both haplotypes from the Amuq E period appear to be identical to examples from the Amuq C period.[12] If the DNA has not been corrupted or contaminated, this similarity in the genetic data may suggest that, genetically speaking — at least for the Tell Kurdu case study — some individuals living in the Ubaid-related Amuq E settlement of the fifth millennium B.C. were descendents of the sixth-millennium Halaf-related Amuq C population. Although the sample sizes are small and the data still preliminary, the evidence suggests that individuals from both phases originated from the same matriline. When viewed in light of the artifactual data from Tell Kurdu, which strongly support the idea that the Amuq E period brought with it significant cultural transformations, these data become meaningful.

As alluded to above, the fact that mtDNA is inherited from the mother may allow for further consideration of social dynamics at Tell Kurdu. Various hypotheses have been presented about social-descent groups within Ubaid

[10] Although there is undeniably still room for improvement, methods of extraction have improved significantly over the past decade, and this has increased the laboratory success rate (Bouwman et al. 2006; Brown 2001; Kemp, Monroe, and Smith 2006; Reed 2005).

[11] The DNA haplotype combinations yielded by the analyses of the Tell Kurdu data happen to be extremely rare among modern populations. This rarity suggests an unlikely level of isolation of the Tell Kurdu population from the world gene pool. One interpretation for this rarity could be that the haplotype combinations result from "mistyping" of degraded DNA (O. Gökçümen, pers. comm.). At present there are at least three burials from Tell Kurdu excavated in 1998 for which DNA analyses have not yet been conducted. Analyses on these individuals may allow us to assess further the accuracy of the initial DNA data.

[12] The mtDNA haplotype sequence (i.e., 104T, 187T, 216G, 239G, 319C) was identified among interments from both the Amuq C and E periods.

oi.uchicago.edu

Table 18.1. Results of aDNA analyses conducted by Mekel-Bobrov and Lahn (after Mekel-Bobrov and Lahn 2004: table 15)

Phase	*Individual*	*Amelogenin*	*MtDNA Haplotype (position 16,000+)*
C	1) 12:18	XY	104T, 187T, 216G, 239G, 319C
C	2) 25:8	XX	94G, 163G, 187T
C	3) 12:14	XY	104T, 187T, 216G, 239G, 319C
C	4) 25:89	Undetermined*	Undetermined
C	5) 25:80	XY	104T, 187T, 216G, 219G, 312G
C	6) 22:2	Undetermined	Undetermined
C/D/E	7) 23:10	Undetermined	Undetermined
C/D/E	8) 26:2	XY	94G, 163G, 187T
C/D/E	9) 12:12	Not Analyzed	—
C/D/E	10) 12:13	XY	104T, 187T, 216G, 239G, 319C
C/D/E	11) 26:12	XX	104T, 187T, 216G, 239G, 319C
C/D/E	12) 24:27	Undetermined	104T, 187T, 216G, 219G, 312G
E	14) 24:3	XX	104T, 187T, 216G, 239G, 319C
E	15) 23:11	Undetermined	104T, 187T, 216G, 239G, 319C

* "Undetermined" denotes failure to obtain PCR product or unambiguous sequence from at least two independent extracts. Individuals that yielded only partial mitochondrial DNA sequences are not included here. Haplotypes are designated in reference to the Cambridge reference sequence (Anderson et al. 1981).

communities (Adams 1989: 444; Forest 1989; and T. C. Patterson's comments in Henrickson and Thuesen 1989: 225–26). Suggestions that tokens or "jetons" were mnemonic devices to keep track of contractual marriage transactions are in essence based on the presence of patrilocal or patrilineal arrangements, because women (as brides) are assumed to have circulated between different Ubaid villages to form new alliances and networks (Forest 1989). The tentative evidence from Tell Kurdu appears to contradict this hypothesis. Rather, the genetic continuity suggested by the mtDNA may indicate that we are dealing with an endogamous or matrilocal society in both the Amuq C and Amuq E periods.[13] If women were imported from elsewhere, then we would not be able to identify continuity in the matrilineal descent. This in turn suggests that either male spouses were imported into Tell Kurdu society or the inhabitants were endogamously marrying within their own social group.

Using the argument that some Ubaid communities may have been matrilocal to explain the mechanisms of the Ubaid expansion would, however, be problematic. While exogamy refers to the importation of spouses from other villages, ethnographically speaking, this often applies to a few nearby villages and rarely includes ones that are at supra-regional distances. Whereas exogamy could undoubtedly strengthen ties between villages and contribute to the maintenance of regional ceramic styles, it would be premature to extrapolate this reconstruction to a regional scale and to thus assume it was the underlying cause for the Ubaid expansion.

Overall the data from Tell Kurdu suggest a way ahead for the study of the Amuq C to Amuq E transition. Perhaps the best way to proceed toward gaining a more comprehensive view of the Ubaid expansion is to seek to understand parallel transitions at other sites and different sub-regions and to return later to the larger (and presently hard-to-answer) questions regarding the mechanisms of this larger supra-regional phenomenon.

[13] I would like to thank Ulf Schoop for alerting me to this point.

oi.uchicago.edu

CONCLUSION

The differences described above clearly set the nature of the two phases at Tell Kurdu apart. Changes in the architecture, mortuary practices, ceramics, figurines, and craft production at Tell Kurdu between the Halaf-related Amuq C phase and the subsequent Ubaid-related Amuq E phase were investigated. The earlier Amuq C phase is characterized by a society where local elements remained dominant despite links to more "cosmopolitan" aspects of the world of the sixth millennium B.C. This suggests that the inhabitants of Tell Kurdu had reservations about participating fully in what has been referred to as a Halaf "interaction sphere." They were, though, well aware of Halaf styles, as is very evident from the painted designs that they appropriated for (a small proportion of) their ceramics.

Even though Tell Kurdu is geographically distant from the zone in which Ubaid material-cultural elements are prolific, the Amuq E phase is characterized by considerable stylistic similarity with the broader Ubaid tradition.[14] When categories such as preferences in the treatment of the dead and craft production are also included, the changes in question emerge as being far beyond mere stylistic appropriations and appear to embrace significant societal and cultural transformations of habits and lifestyles.

After a long adherence to local styles, why did society at Tell Kurdu undergo such significant transformations during the fifth millennium B.C.? One way in which answers to this question can be sought is through analysis of aDNA. Despite the small sample size, if the aDNA evidence is correct, the haplotypic similarity between individuals from the sixth- and fifth-millennium populations appears to indicate genetic continuity. If correct, then the material cultural evidence illustrates how, over a period of time, a local community can adopt and appropriate supra-regional styles, and even transform its worldviews, ideologies, beliefs, and the way in which it approaches other cultural traditions.

ACKNOWLEDGMENTS

This paper was completed at the Prehistory Section of Istanbul University through post-doctoral funding made possible by the Turkish Academy of Sciences (TÜBA). I owe many thanks to Ulf Schoop, Ömer Gökçümen, Olivier Nieuwenhuyse, Mehmet Ekinci, Ellen Belcher, Rob Carter, and an anonymous reviewer for their insightful comments on an earlier draft of this paper, but take full responsibility for any remaining errors. This article could not have been written had it not been for Sabrina Sholts' initiative for arranging to get DNA analyses conducted on the human bone from Tell Kurdu. I am indebted to Nitzan Mekel-Bobrov for analyzing the aDNA and Bruce Lahn for supplying laboratory space, assistance, and support. I would like to thank Fokke Gerritsen for helping me with the figures for both the article and the poster version of this paper. Much of the recent work on the Amuq E levels at Tell Kurdu was undertaken under the directorship of Dr. Aslıhan Yener in 1996, 1998, and 1999. A large part of our understanding of the Amuq C levels comes from work carried out under my direction and that of Fokke Gerritsen in 2001. the Oriental Institute of the University of Chicago, the National Science Foundation, the Wenner-Gren Foundation, the American Research Institute in Turkey, Fulbright-Hays, various Northwestern University fellowships, the Turkish Academy of Sciences, the Archaeological Institute of America, and a number of private donors are gratefully acknowledged for funding the excavations and the research conducted at the site.

BIBLIOGRAPHY

Adams, Robert McC.

1989 "Concluding Remarks by Robert McCormick Adams and Henry T. Wright." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st,

[14] Unlike the categories of material discussed here, the lithic technology may show a degree of continuity across Amuq phases C to E (Braidwood and Braidwood 1960: 512; Edens 2000: 78). There are nonetheless some changes across this span of time that may follow wider regional trends, such as a relative decrease in the prevalence of backed and/or truncated blades and gloss (Edens 2000: 78).

oi.uchicago.edu

1988), edited by E. F. Henrickson and I. Thuesen, pp. 441–56. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Akkermans, Peter M. M. G.

1988 "The Period IV Pottery." In *Hammam et-Turkman*, Volume 1: *Report on the University of Amsterdam's 1981–84 Excavations in Syria*, edited by M. N. van Loon, pp. 181–285. Leiden: Nederlands Historisch-Archaeologisch Instituut te Istanbul.

1989 "Halaf Mortuary Practices: A Survey." In *To the Euphrates and Beyond: Archaeological Studies in Honor of Maurits N. van Loon*, edited by O. M. C. Haex, H. H. Curvers, and P. M. M. G. Akkermans, pp. 75–88. Rotterdam: A. A. Balkema.

1993 *Villages in the Steppe: Later Neolithic Settlement and Subsistence in the Balikh Valley, Northern Syria*. Archaeological Series 5. Ann Arbor: International Monographs in Prehistory.

Akkermans, Peter M. M. G., and K. Duistermaat

1997 "Of Storage and Nomads: The Sealings from Late Neolithic Sabi Abyad, Syria." *Paléorient* 22: 17–44.

Akkermans, Peter M. M. G., and Glenn M. Schwartz

2003 *The Archaeology of Syria: From Complex Hunter-Gatherers to Early Urban Societies (ca. 16,000–300 B.C.)*. Cambridge: Cambridge University Press.

Anderson S.; A. T. Bankier; B. G. Barrell; M. H. de Bruijn; A. R. Coulson; J. Drouin; I. C. Eperon; D. P. Nierlich; B. A. Roe; F. Sanger; P. H. Schreier; A. J. Smith; R. Staden; and I. G. Young

1981 "Sequence and Organization of the Human Mitochondrial Genome." *Nature* April 9 290: 457–65.

Arzt, J. M.

2001 Excavations at Tell Ziyadeh, Syria: The Northern Ubaid Reconsidered. Ph.D. dissertation, Yale University.

Berman, Judith C.

1994 "The Ceramic Evidence for Sociopolitical Organization in Ubaid Southwest Iran." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 23–33. Monographs in World Archaeology 18. Madison: Prehistory Press.

Bernbeck, Reinhard, and Susan Pollock

2003 "The Biography of an Early Halaf Village: Fıstıklı Höyük 1999–2000." *Istanbuler Mitteilungen* 53: 9–77.

Bouwman, A. S.; E. R. Chilvers; K. A. Brown; and T. A. Brown

2006 "Brief Communication: Identification of the Authentic Ancient DNA Sequence in a Human Bone Contaminated with Modern DNA." *American Journal of Physical Anthropology*: 428–31.

Braidwood, Robert J.

1939 "A Note on a Multiple-brush Device Used by Near Eastern Potters of the Fourth Millennium B.C." *Man* 39: 192–94.

Braidwood, Robert J., and Linda S. Braidwood

1960 *Excavations in the Plain of Antioch*, Volume 1: *The Earlier Assemblages: Phases A–J*. Oriental Institute Publications 61. Chicago: University of Chicago Press.

Breniquet, Catherine

1996 *La disparition de la culture de Halaf: Les origines de la culture d'Obeid dans le nord de la Mésopotamie*. Bibliothèque de la Délégation archéologique française en Iraq 9. Paris: Éditions recherches sur les civilisations.

Brown, T.

2001 "Ancient DNA." In *Handbook of Archaeological Sciences*, edited by D. R. Brothwell and A. M. Pollard, pp. 301–11. New York: Willey.

Buccellati, G.; D. Buia; and S. Reimer

1991 "Tell Ziyada: The First Three Seasons of Excavation." *Bulletin of the Canadian Society for Mesopotamian Studies* 21: 31–61.

oi.uchicago.edu

Campbell, Stuart
1992 Culture, Chronology and Change in the Later Neolithic of North Mesopotamia. Ph.D. dissertation, University of Edinburgh.
2007 "Rethinking Halaf Chronologies." *Paléorient* 33/1: 103–36.

Casana, Jesse J.
2000 "The Kilns." In "Tell Kurdu Excavations 1999," by K. A. Yener et al., pp. 55–58. *Anatolica* 26: 37–117.

Costin, C. L.
1991 "Craft Specialization: Issues in Defining, Documenting and Explaining the Organization of Production." *Archaeological Method and Theory*: 1–56.
1996 "Exploring the Relationship between Gender and Craft in Complex Societies: Methodological and Theoretical Issues of Gender and Attribution." In *Gender and Archaeology*, edited by R. Wright, pp. 111–42. Philadelphia: University of Pennsylvania Press.

Davidson, Thomas E.
1977 Regional Variation within the Halaf Ceramic Tradition. Ph.D. dissertation, University of Edinburgh.

de Contenson, Henri
1992 *Préhistoire de Ras Shamra: Les sondages stratigraphiques de 1955 à 1976*. 2 volumes. Ras Shamra-Ougarit 8. Paris: Éditions recherches sur les civilisations.

Diebold, B.
2000 "Preliminary Report on the Ceramic Assemblage at Tell Kurdu." In "Tell Kurdu Excavations 1999," by K. A. Yener et al., pp. 58–65. *Anatolica* 26: 37–117.
2004 "The Pottery." In "Tell Kurdu Excavations 2001," by R. Özbal et al., pp. 52–55, 81–86. *Anatolica* 30: 37–107.

Downs, Deborah
1984 "Tell Madhur: A Summary Report on the Excavations; The Human Skeletal Remains from Tell Madhhur." *Sumer* 43: 127.

Edens, Christopher
2000 "Chipped Stone." In "Tell Kurdu Excavations 1999," by K. A. Yener et al., pp. 64–78. *Anatolica* 26: 37–117.

Edens, Christopher, and K. Aslıhan Yener
2000 "Excavations at Tell Kurdu, 1996 and 1998." *American Journal of Archaeology* 104: 198–215.

Evin, J.
1995 "Possibilité et nécessité de la calibration des datations C-14 de l'archéologie du Proche-Orient." *Paléorient* 21: 5–16.

Forest, Jean-Daniel
1983 *Les practiques funéraires en Mésopotamie du 5^{e} millénaire au début du 3^{e}: Étude de cas*. Paris: Éditions recherches sur les civilisations.
1989 "Les 'jetons' non Urukiens et l'échange des femmes." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 199–226. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.
1991 "L'architecture de la phase de 'Oueili-Obeid 0." In *Oueili: Travaux de 1985*, edited by J.-L. Huot, pp. 17–158. Paris: Éditions recherches sur les civilisations.

Garstang, John
1953 *Prehistoric Mersin: Yümük Tepe in Southern Turkey*. Oxford: Clarendon Press.

Gerritsen, Fokke A.
2004 "The Small Finds." In "Tell Kurdu Excavations 2001," by R. Özbal et al., pp. 60–62. *Anatolica* 30: 37–108.

oi.uchicago.edu

Gerritsen, Fokke A., and Rana Özbal

2004 "Absolute Chronology and Stratigraphic Considerations." In "Tell Kurdu Excavations 2001," by R. Özbal et al., pp. 50–52. *Anatolica* 30: 37–108.

Gerritsen, Fokke A., and Sabrina Sholts

2004 "The Tell Kurdu Human Burials." In "Tell Kurdu Excavations 2001," by R. Özbal et al., pp. 70–72. *Anatolica* 30: 37–108.

Hammade, Hamido, and Y. Koike

1992 "Syrian Archaeological Expedition in the Tishreen Dam Basin Excavations at Tell al Abr 1990 and 1991." *Damaszener Mitteilungen* 6: 107–75.

Hammade, Hamido, and Yayoi Yamazaki

1995 "A Preliminary Report on the Excavation at Tell al-'Abr on the Upper Euphrates, 1992." *Akkadica* 93: 4–10.

2006 *Tell al-'Abr (Syria): Ubaid and Uruk Periods*. Association pour la promotion de l'histoire et de l'archéologie orientales, mémoires 4. Louvain: Peeters.

Henrickson, Elizabeth F., and Ingolf Thuesen, editors

1989 *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988). Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Hijjara, Ismail

1978 "Three New Graves at Arpachiyah." *World Archaeology* 10: 125–28.

1997 *The Halaf Period in Northern Mesopotamia*. Edubba 6. London: NABU.

Hole, Frank

1989 "Patterns of Burial in the Fifth Millennium." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 149–80. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

1994 "Environmental Instabilities and Urban Origins." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 121–51. Monographs in World Archaeology 18. Madison: Prehistory Press.

1997 "Paleoenvironment and Human Society in the Jezireh of Northern Mesopotamia 20,000–6,000 B.P." *Paléorient* 23: 39–49.

2008 "Architectural Changes at Tell Ziyadeh." *Chronique Archéologique en Syrie* 3: 113–19.

Jasim, Sabah A.

1985 *The 'Ubaid Period in Iraq: Recent Excavations in the Hamrin Region*. British Archaeological Reports, International Series 267. Oxford: British Archaeological Reports.

Kemp, B. M.; C. Monroe; and D. G. Smith

2006 "Ancient DNA 101: A Guide for Archaeologists." Poster Presented at the 71st Annual Meeting of the Society of American Archaeology. San Juan, Puerto Rico.

Koizumi, Tatsundo, and Hiroshi Sudo

2001 "The Stratigraphy and Architecture of Sector B of Tell Kosak Shamali." In *Tell Kosak Shamali*, Volume 1: *The Archaeological Investigations on the Upper Euphrates, Syria*, edited by Y. Nishiaki and T. Matsutani, pp. 115–52. University Museum, the University of Tokyo Monograph 2. Tokyo: The University Museum, University of Tokyo; Oxford: Oxbow Books.

Leenders, R.

1989 "The Red Wash Ware Ceramic Assemblage in Syria: A Review." In *To the Euphrates and Beyond: Archaeological Studies in Honour of Maurits N. van Loon*, edited by O. M. C. Haex, H. H. Curvers, and P. M. M. G. Akkermans, pp. 89–101. Rotterdam: A. A. Balkema.

Le Mière, M., and Olivier Nieuwenhuyse

1996 "The Prehistoric Pottery." In *Tell Sabi Abyad: The Late Neolithic Settlement*, edited by P. M. M. G. Akkermans, pp. 119–284. Leiden: Nederlands Historisch-Archaeologisch Instituut te Istanbul.

oi.uchicago.edu

Lorentz, Kirsi O.

n.d Tell Kurdu Human Skeletal Remains. Unpublished report completed in June 2005.

Mallowan, M. E. L., and J. Cruikshank Rose

1935 "Excavations at Tall Arpachiyah, 1933." *Iraq* 2: 1–178.

Mekel-Bobrov, Nitzan, and Bruce T. Lahn

2004 "Ancient DNA Analysis of Human Remains from Tell Kurdu." In "Tell Kurdu Excavations 2001," by R. Özbal et al., pp. 72–73, 91. *Anatolica* 30: 37–107.

Merpert, N., and R. M. Munchaev

1993a "Burial Practices of the Halaf Culture." In *Early Stages in the Evolution of Mesopotamian Civilization: Soviet Excavations in Northern Iraq*, edited by N. Yoffee and J. J. Clark, pp. 207–24. Tucson: University of Arizona Press.

1993b "Yarim Tepe I: The Upper Hassuna Levels." In *Early Stages in the Evolution of Mesopotamian Civilization: Soviet Excavations in Northern Iraq*, edited by N. Yoffee and J. J. Clark, pp. 73–144. Tucson: University of Arizona Press.

1993c "Yarim Tepe II: The Halaf Levels." In *Early Stages in the Evolution of Mesopotamian Civilization: Soviet Excavations in Northern Iraq*, edited by N. Yoffee and J. J. Clark, pp. 129–62. Tucson: University of Arizona Press.

Molleson, T., and Stuart Campbell

1995 "Deformed Skulls at Tell Arpachiyah: The Social Context." In *The Archaeology of Death in the Ancient Near East*, edited by S. Campbell and A. Green, pp. 45–55. Oxbow Monograph 51. Oxford: Oxbow Books.

Moore, A. M. T.

2002 "Pottery Kiln Sites at al-'Ubaid and Eridu." *Iraq* 64: 69–77.

Nissen, Hans J.

1988 *The Early History of the Ancient Near East, 9000–2000 B.C.* Translated by Elizabeth Lutzeier, with Kenneth Northcott. Chicago: University of Chicago Press.

1989 "The 'Ubaid Period in the Context of the Early History of the Ancient Near East." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 245–55. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Oates, Joan

1969 "Choga Mami, 1967–68: A Preliminary Report." *Iraq* 3: 115–52.

1993 "Trade and Power in the Fifth and Fourth Millennia B.C.: New Evidence from Northern Mesopotamia." *World Archaeology* 24: 403–22.

2004 "Ubaid Mesopotamia Revisited." In *From Handaxe to Khan: Essays Presented to Peder Mortensen on the Occasion of His 70th Birthday*, edited by K. von Folsach, H. Thrane, and I. Thuesen, pp. 87–104. Aarhus: Aarhus University Press.

Özbal, Rana

2006 Households, Daily Practice and Cultural Appropriation at Sixth Millennium Tell Kurdu. Ph.D. dissertation, Northwestern University.

Özbal, Rana, and Fokke A. Gerritsen

2004 "Overall Plan and Structures." In "Tell Kurdu Excavations 2001," by R. Özbal et al., pp. 38–50. *Anatolica* 30: 37–108.

Özbal, Rana; Fokke A. Gerritsen; B. Diebold; Elizabeth Healey; N. Aydın; M. Loyet; F. Nardulli; D. Reese; H. Ekstrom; Sabrina Sholts; Nitzan Mekel-Bobrov; and Bruce T. Lahn

2004 "Tell Kurdu Excavations 2001." *Anatolica* 30: 37–108.

Özbal, Rana; Fokke A. Gerritsen; and K. Aslıhan Yener

2003 "2001 Tell Kurdu Kazıları." *Kazı Sonuçları Toplantısı* 24/1: 501–12.

oi.uchicago.edu

Özbek, M.
2001 "Cranial Deformation in a Subadult Sample from Değirmentepe (Chalcolithic, Turkey)." *American Journal of Physical Anthropology* 115: 238–44.

Parker Pearson, Michael, and Colin Richards
1994 "Ordering the World: Perceptions of Architecture, Space and Time." In *Architecture and Order: Approaches to Social Space*, edited by M. Parker Pearson and C. Richards, pp. 1–37. Material Cultures. London and New York: Routledge.

Perkins, Ann L., editor
1950 "Archaeological News: The Near East." *American Journal of Archaeology* 54: 58–72.

Pollock, Susan
1999 *Ancient Mesopotamia: The Eden that Never Was*. Cambridge: Cambridge University Press.

Reed, David M., editor
2005 *Biomolecular Archaeology: Genetic Approaches to the Past*. Carbondale: Carbondale Center for Archaeological Investigations, Southern Illinois University.

Rice, Prudence
1987 *Pottery Analysis: A Sourcebook*. Chicago: University of Chicago Press.

Safar, Fuad; Mohamed A. Mustafa; and Seton Lloyd
1981 *Eridu*. Baghdad: Ministry of Culture and Information.

Schwartz, Glenn M.
1988 *A Ceramic Chronology from Tell Leilan, Operation 1*. Yale Tell Leilan Research 1. New Haven: Yale University Press.

Şenyürek, M. S., and S. Tunakan
1951 "Şeyh Hüyük İskeletleri." *Belleten* 60: 431–45.

Stein, Gil J.
1994 "Economy, Ritual and Power in 'Ubaid Mesopotamia." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 35–46. Monographs in World Archaeology 18. Madison: Prehistory Press.

Thuesen, Ingolf
1996 "Tell Mashnaqa." In *La Syrie préhistorique: Exposition archéologique Syro-Européenne*, edited by S. Muhesen, pp. 47–54. Damascus: Éditions de l'Institut Français d'Études Arabes de Damas.
2000 "Ubaid Expansion in the Khabur: New Evidence from Tell Mashnaqa." In *La Djéziré et l'Euphrate Syriens de la protohistoire à la fin du II^e millénaire av. J.-C.: Tendances dans l'interprétation historique des données nouvelles*, edited by O. Rouault and M. Wäfler, pp. 71–79. Subartu 7. Turnhout: Brepols.

Tobler, Arthur J.
1950 *Excavations at Tepe Gawra*, Volume 2: *Levels IX–XX*. Publications of the Baghdad School, Excavations 1. Philadelphia: University of Pennsylvania Press.

Valladas, H.; J. Evin; and M. Arnold
1996 "Datation par la méthode du carbone 14 des couches Obeid 0 et 1 de Tell el Oueili (Iraq)." In *Oueili: Travaux de 1987 et 1989*, edited by J.-L. Huot, pp. 380–83. Paris: Éditions recherches sur les civilisations.

Woolley, C. Leonard
1955 *Ur Excavations*, Volume 4: *The Early Periods*. Philadelphia: University Museum Philadelphia; London: British Museum.

Wright, G. E.
1951 "An Important Correlation between the Palestinian and Syrian Chalcolithic." *Bulletin of the American Schools of Oriental Research* 122: 52–55.

Wright, Henry T., and Susan Pollock
1987 "Regional Socio-economic Organization in Southern Mesopotamia: The Middle and Later Fifth Millennium." In *Préhistoire de la Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du*

oi.uchicago.edu

djebel Hamrin (Colloque international du Centre National de la Recherche Scientifique, Paris, 17–19 décembre 1984), edited by J.-L. Huot, pp. 317–29. Paris: Éditions de Centre National de la Recherche Scientifique.

Yener, K. Aslıhan

2000a "Administrative Artefacts." In "Tell Kurdu Excavations 1999," by K. A. Yener et al., pp. 65–68. *Anatolica* 26: 32–117.

2000b "Between the Tigris-Euphrates and the Mediterranean Sea: The Oriental Institute Amuq Valley Regional Projects, Turkey." In *Proceedings of the First International Congress on the Archaeology of the Ancient Near East*, edited by P. Matthiae, A. Enea, L. Peyronel, and F. Pinnock, pp. 1801–12. Rome: Dipartimento di scienze storiche, archeologiche e antropologiche dell'antichità, Università degli studi di Roma "La sapienza."

2001 "1999 Tell Kurdu Kazıları." *Kazı Sonuçları Toplantısı* 22: 231–46.

Yener, K. Aslıhan; Christopher Edens; Jesse J. Casana; B. Diebold; H. Ekstrom; M. Loyet; and Rana Özbal

2000a "Tell Kurdu Excavations 1999." *Anatolica* 26: 32–117.

Yener, K. Aslıhan; Christopher Edens; Timothy P. Harrison; J. Verstraete; and Tony J. Wilkinson

2000b "The Amuq Valley Regional Projects, 1995–1998." *American Journal of Archaeology* 104: 163–220.

oi.uchicago.edu

19

AN ASPECT OF THE UBAID INTRUSION IN THE SYRIAN UPPER EUPHRATES VALLEY

YAYOI YAMAZAKI, *Japanese International Cooperation Agency*

INTRODUCTION

THE SYRIAN EUPHRATES REGION

The discovery of Uruk-period sites along the Syrian Euphrates Valley through excavations undertaken in the 1970s, in association with the construction of the Tabqa Dam, shed new light on the phenomenon of Uruk activity in the upper reaches of the river valley and gave rise to much debate concerning the dispersion of this "southern" culture upstream. These excavations, however, contributed much less to our knowledge of earlier Ubaid-related activity.

While Ubaid sites had been identified by surveys conducted along the Euphrates during the 1970s and 1980s (Sanlaville 1985; Cauvin and Molist 1987), it was not until the Tishreen Dam project in the 1990s that excavations produced concrete data concerning Ubaid settlement in the region. Three Ubaid sites (Tell al-'Abr, Kosak Shamali, and a small site near the modern village of Abu Dame) in the Tishreen area were excavated, and two of them have now been published in detail (Nishiaki and Matsutani 2001, 2003; Hammade and Yamazaki 2006). They are all modest in size but offer substantial information concerning the character of the Ubaid in this region. In this paper I draw a tentative outline of the Ubaid in the upper part of the Syrian Euphrates Valley, with a special focus on the cultural sequence of Tell al-'Abr.

THE GEOGRAPHICAL SETTING OF TELL AL-'ABR

Tell al-'Abr is located on the east bank of the Euphrates and, as indicated by the modern name 'Abr "crossing," was once a crossing point on the river. On the opposite bank from the site is the junction of the Euphrates with its tributary the Sejour, along which run routes to the Shamiyye[1] region to the west (figs 19.1–2). Sites producing Ubaid sherds are found in close proximity to these rivers.[2] Although few details are yet available, the presence of such sites provides tentative evidence for connections along the river during the Chalcolithic period. The strategic location of 'Abr close to the confluence of the Euphrates and the Sejour would have given the site a significance in relation to past routes, a factor that may have facilitated its continued occupation into the Uruk period.

[1] Taking the Euphrates as a border, the area of the west bank is locally called "Shamiyye," while the east bank is recognized as "Jazira."

[2] Some sherds were reported from the early excavations at Tell Ahmar (Thureau-Dangin and Dunand 1936). Other sites, such as Houshariyye, Jaade Mughara, and Tell Baddaye, are also said to have yielded Ubaid ceramics.

oi.uchicago.edu

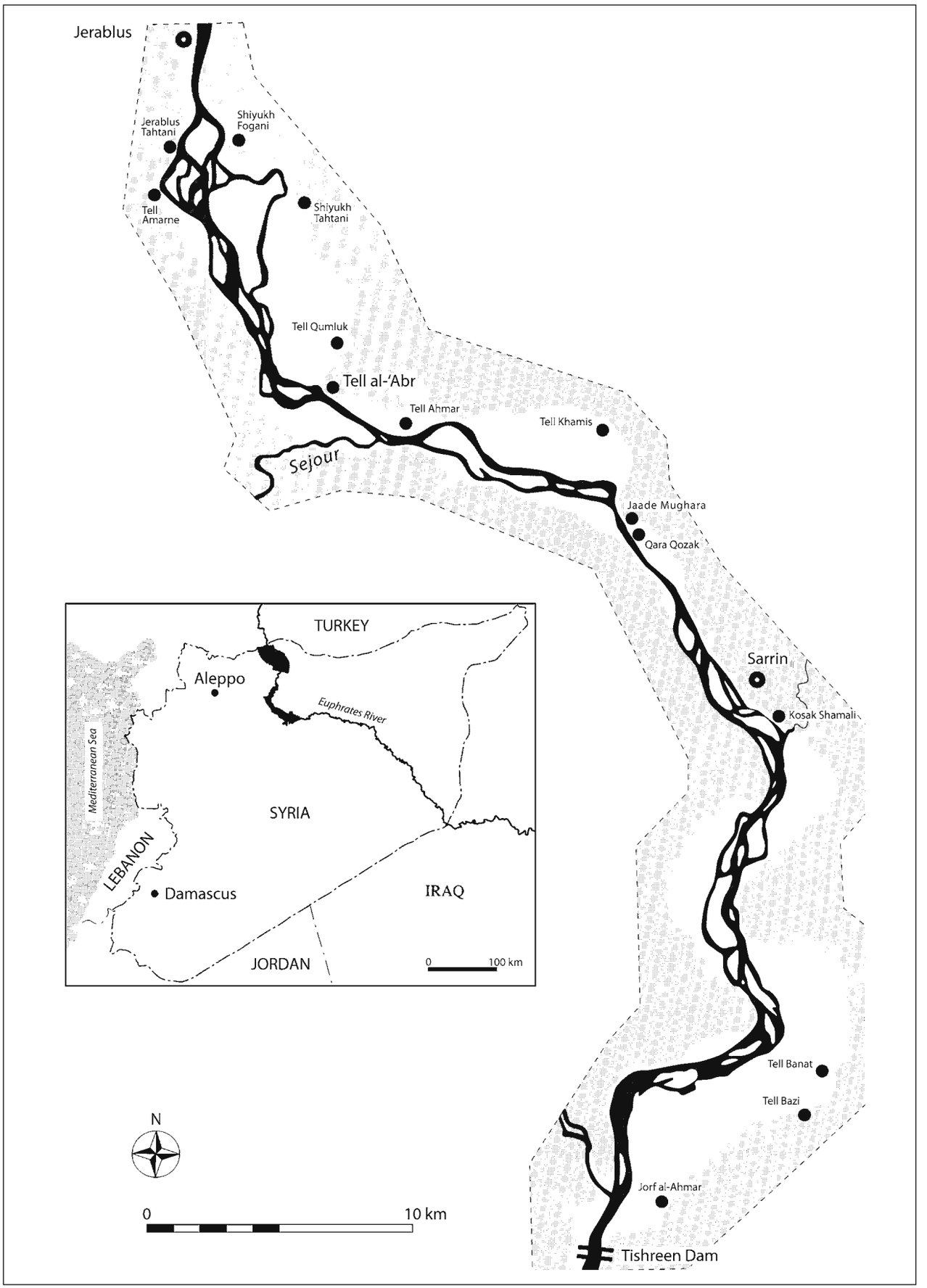


Figure 19.1. Archaeological sites in the Tishreen area

oi.uchicago.edu

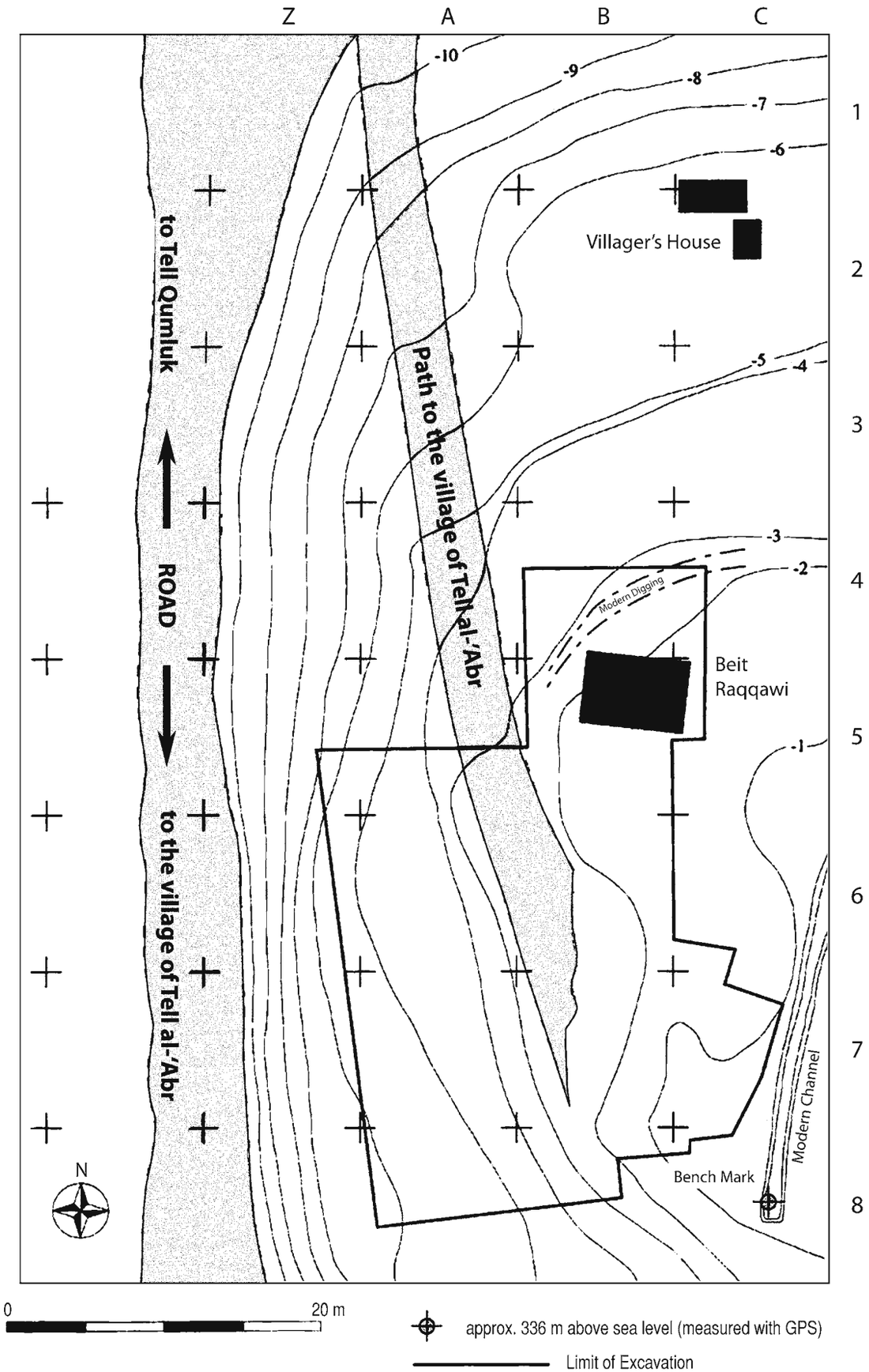


Figure 19.2. Plan of Tell al-'Abr showing the excavated area; the bench mark is located at approx. 336 m above sea level

oi.uchicago.edu

ABSOLUTE DATING

Absolute dating at Tell al-'Abr is limited to material from the lower levels (level 7–level 5). Radiocarbon evidence indicates that level 6 should be dated ca. 5200–5100 cal. B.C., although dates retrieved from level 7 are inconsistent. The date of the earliest Chalcolithic settlement at Tell al-'Abr (i.e., level 7) can be placed in the last few centuries of the sixth millennium cal. B.C. by extrapolating from the level 6 dates.

In light of the comparable results obtained at the other excavated Ubaid site in the Tishreen — Kosak Shamali, which is dated as early as 5200 cal. B.C. (Nishiaki and Matsutani 2003) — the introduction of the Ubaid to this region may have occurred toward the end of the sixth millennium cal. B.C. These results are consistent with dates from the sites in the Khabur region (Thuesen 2000; Hole 2000, 2001). In the case of the Balikh Valley, occupation at Hammam et-Turkman is dated around 5000 cal. B.C., which is rather later than the dates from the Tishreen sites (Akkermans 1988). While the exact implications of these dates require further consideration, it is clear that we must now reconsider the process by which the Ubaid developed in the Syrian Jazira.

THE STRATIGRAPHIC SEQUENCE

At Tell al-'Abr, a continuous sequence of seven Ubaid levels was identified sealed below Uruk levels. Level 7 is the earliest level and lies on the virgin soil; the latest is level 2. The "Intermediate Level" between levels 6 and 5 is treated as one level (Hammade and Yamazaki 2006: 15).

Except in the case of the Intermediate Level and level 2, the bulk of the excavated area is characterized by structures related to potters' activities. Kilns, workrooms, and storerooms are the major elements,[3] and open spaces also appear to have functioned as working areas. However, the location of different areas of activity and their relationship to areas of domestic activity differ between levels, and there appears to have been no consistent planning through levels. However, the excavated areas show quite distinct features and could provide an insight into the positioning of the manufacturing activity within overall settlement layouts. As the eastern part of the tell is occupied by the modern village of Tell al-'Abr, it is difficult to gain a comprehensive picture of the Ubaid settlement. Nonetheless, we can discuss broad functional divisions within the Ubaid structures and thus outline the distinct characteristics of a settlement with a specialized ceramic industry.

LEVEL 7

Level 7 consists of several units with a clear building plan (fig. 19.3). A central complex with a large central room (R 7-1) appears to have functioned as a main activity area. The exact use of the central room is not clear; however, careful treatment of the floor to make it waterproof indicates that this room played a particular role within the complex. Small rooms are densely clustered to the east of this room, all of which contain various objects related to ceramic production. An oval, basin-like installation set in one of these rooms might have been used for the preparation of clay. The western area of this complex appears to have been reserved for domestic use judging from the grill-plan storage structure[4] and the *tannur*.

Of the other complexes in this level, the southern unit is composed of three small workrooms, two of which are fully or half paved with mudbricks. The third has some tiny installations made of a pebble-and-clay mix. Several potter's tools were also recovered from these rooms. In this level, kilns are usually located outside the buildings except for one in the north part of the area. A rectangular room on the southeast is rather isolated from the others. An engraved plaque[5] was found *in situ* within this room, and it might point to its having had a non-domestic function.

[3] The average size of mudbricks used at the Ubaid levels is 30 × 60 × 8 cm. Those of half width and/or shorter length were also properly used. It is supposed to follow a kind of "cubit system" that is also seen on other Ubaidian sites in Iraq (Kubba 1998). It also matches with those of Kosak Shamali.

[4] Carbonized grains were recovered from the trough-like components.

[5] It is thought to have been brought from a Neolithic site to the south of Chalcolithic Tell al-'Abr.

oi.uchicago.edu

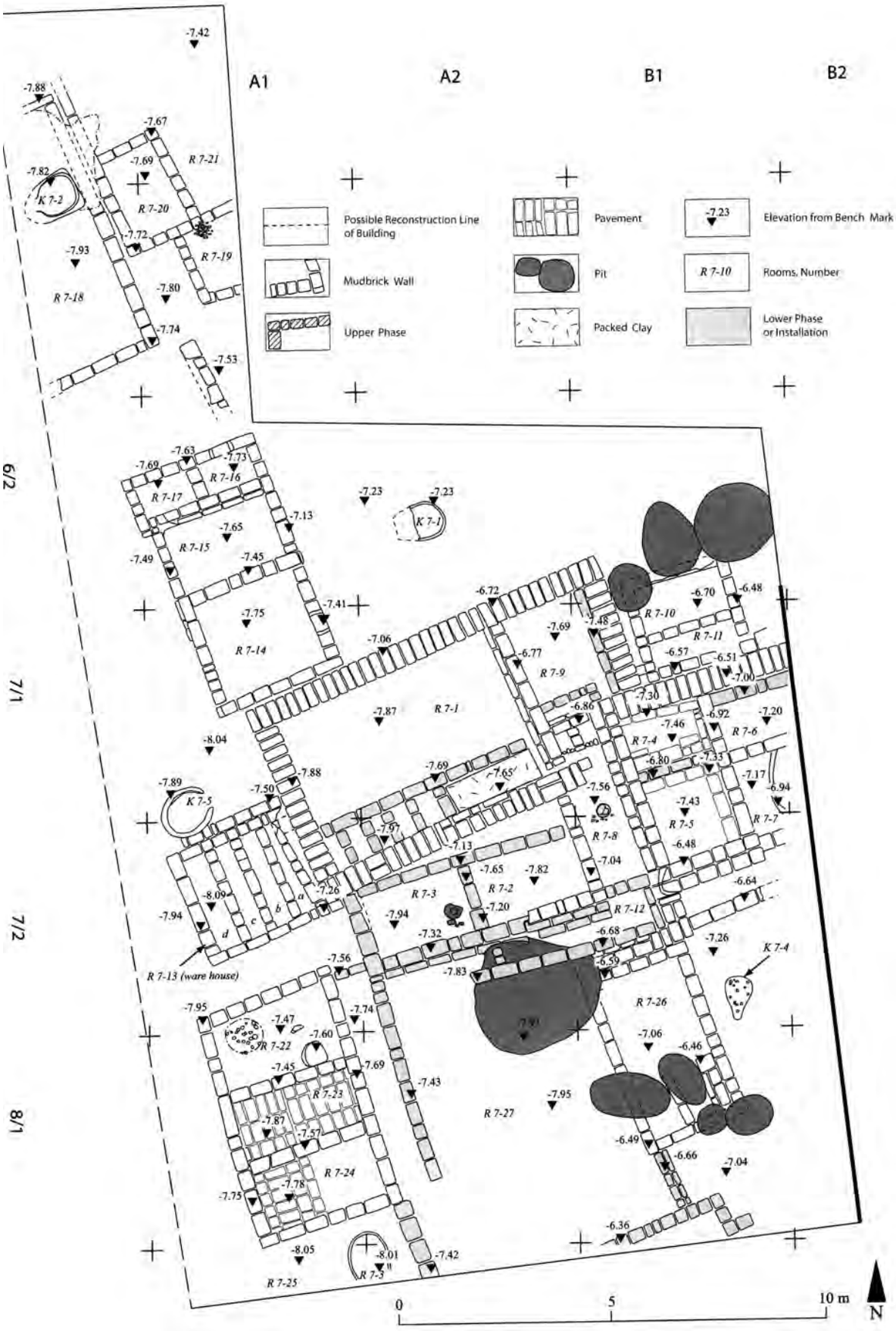


Figure 19.3. The structures of Tell al-'Abr, level 7

oi.uchicago.edu

LEVEL 6

The structures in level 6 are sparsely built and tend to be simpler than those of level 7. Some of the structures reuse level 7 walls as foundations. Most of the rooms are equipped with manufacturing installations, and "domestic" spaces may have shifted to the unexcavated eastern area. Ashy, charcoal-rich soil was observed throughout this level, which suggests an increase in the firing of pottery. At least six kilns exist in this level, and in contrast to the previous level, some of these were built inside rooms. Two kilns were set inside the large room built directly over the central room of level 7 and the other in the square room to the north.[6] Open-air kilns are accompanied with pits, some of which were filled with kiln wasters. One room was paved with mudbrick, a feature that seems to be common among the workrooms at the site. A large, open space in the southern part of the excavated area appears to have been used to store clay.

LEVEL 5

No discernible structures were identified in the Intermediate Level. However, distinctive workshop complexes were found in the northern area of level 5; these can be divided into two groups. The western complex consisted of small, cell-like workrooms and kilns with enclosure walls, providing clear evidence for ceramic production. Some tools with specialized functions, such as artifacts probably used for painting, were found within these small rooms. Some of the rooms were divided into smaller compartments by thin partition walls. One of them was paved with mudbrick and contained several intact vessels *in situ*. The eastern complex consists of rooms that were larger and more featureless than those of the western complex. Clay-lined bins were found in some rooms, although their function remains unclear.

The southern portion of the workshop complexes seems to have been an open space with no substantial structures present. A small, trapezoidal room and its adjacent long walls existed in isolation to the south. This structure appears not to have been completed, and it bears no clear relationship to the evidence for manufacturing activity. However, there is no indication that this room served a domestic function,[7] and I believe that most domestic activity took place outside the excavated area. Considering the relative abundance of artifacts found *in situ* and the unfinished appearance of the trapezoidal room, it is possible that level 5 was abandoned suddenly.

LEVEL 4

Manufacturing activities, especially those related to the clay-firing process, are evidenced by structures from level 4 (fig. 19.4). At least nine kilns were constructed over two phases; some of these represent previously undocumented types of kiln. The kilns were located spatially in two distinct groups, and the workrooms that are positioned in the middle might have functioned as a partition between them. The workrooms were square in shape and of medium size; there are no small, cell-like rooms in level 4. Some installations on the eastern side, such as the "clay-preparation" feature, may have served for common use. Two kilns in the southern area are accompanied by their own workrooms, including an open workspace or "mastaba" of tamped clay.

The northern part of the level 4 extension is characterized by "kilns" and activity connected to the firing stage of ceramic production. Such a concentration of kilns within a limited area would have produced considerable quantities of smoke and ash both around the work area and perhaps also the settlement as a whole. However, the kilns may not have operated simultaneously, and some may have been designed and orientated to facilitate operation during specific seasons or particular weather conditions. For example, the four kilns positioned on a north–south axis may have been employed when the direction of the prevailing wind made this orientation particularly favorable.

---

[6] These rooms are thought to have been open enclosures. Hollows inside the rooms, filled with mud and pebbles, may represent the positions of posts intended to support a tent-like structure.

[7] Several small, intact bowls were recovered *in situ* in the corners of the room.

oi.uchicago.edu

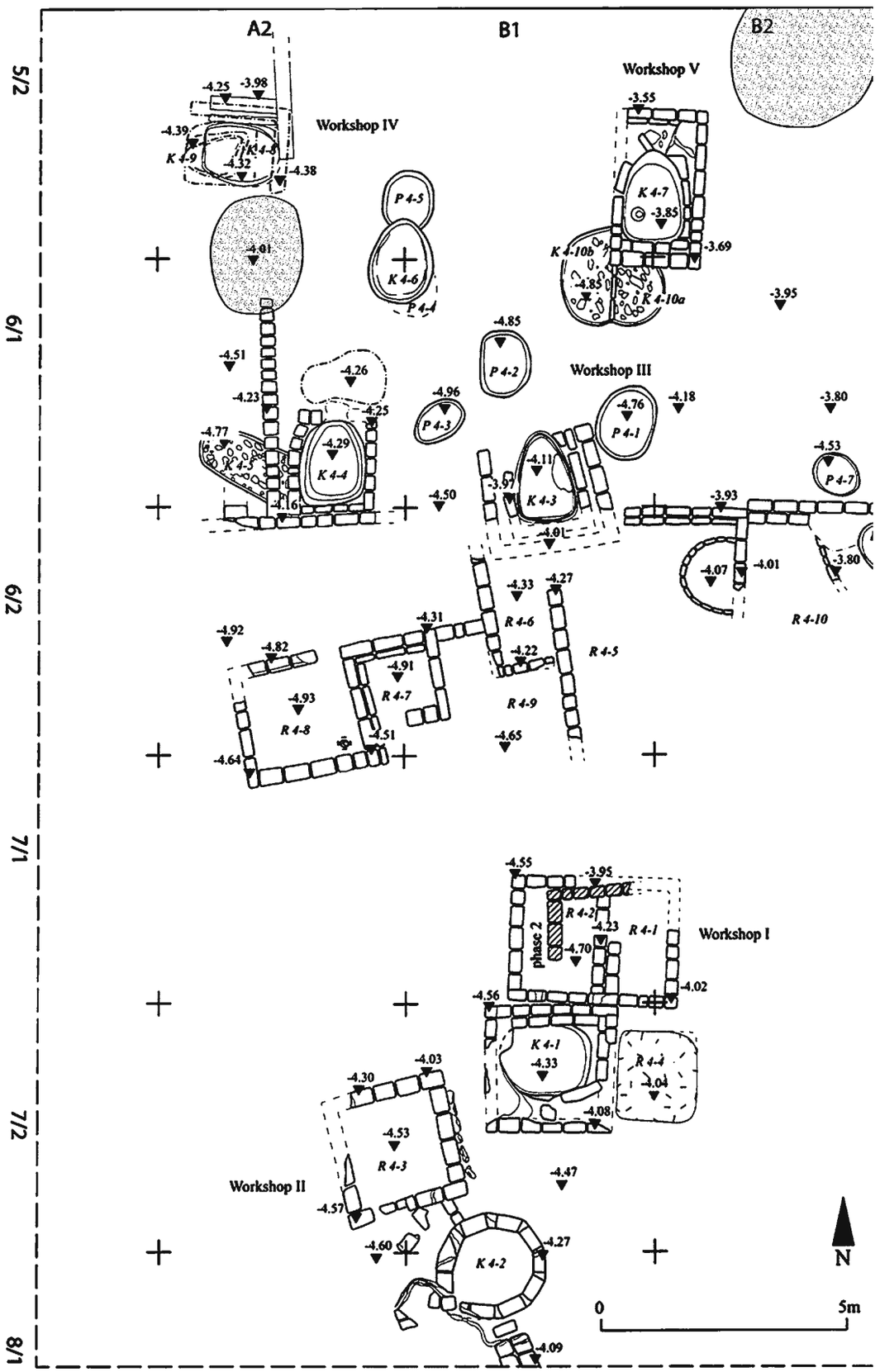


Figure 19.4. The structures of Tell al-'Abr, level 4

oi.uchicago.edu

LEVEL 3

Evidence for ceramic production is less apparent in level 3, and although there are several manufacturing installations, the main complex located in the north of the excavation area includes more domestic features. This level contains several distinctive components. One of these is a rectangular single-room structure with an inner installation rather like a podium. Built in the southern part of the area, and thus separated slightly from the northern complex, this unit may have had a religious character. The other distinctive feature is a large, open area located to the southeast of the northern complex, and which was covered with black, humus-type soil. This might have resulted from animal-processing activity, and the presence of pits containing horn and animal bone may support this suggestion. In addition, three limestone objects in the shape of a human foot were recovered from this area. These enigmatic artifacts are tentatively interpreted as "sandal molds,"[8] which might indicate the existence of leather working, an activity that does not need to take place in a specific structure.

LEVEL 2

Only one building, B 2-1, was identified in the northern part of level 2. This seems to have been used for domestic purposes. The building may have been a part of a larger middle-hall type building unit. Level 2 is quite extensive, but its structures are not densely concentrated. South of B 2-1 stood a separate storage-type structure. Even farther to the south of B 2-1 were several walls that may be related to the infant jar burials from the area. The character of this level is completely different from that of the earlier levels. Level 2 revealed no evidence for manufacturing, nor was there any clear relationship between the structural elements of level 2 and those of the previous levels.

THE KILNS

In total, twenty-seven kilns were excavated between level 7 and level 3 (see table 19.1 for details). Most were pottery kilns and can be distinguished from "*tannur*"-type installations used for baking bread by the indications of heavy firing that marks the outline of the kiln; the colors vary from dark olive-green to red. Oval and horseshoe-shaped plans are common, but other kiln types were also documented, including an example of piriform plan in level 7,[9] and octagonal, (double) semi-oval, and elongated oval plans in level 4. The size of the later kilns (levels 5, 4, and 3) is usually greater than that of earlier ones (levels 7 and 6). Most of them seem to have had a single chamber built directly on the ground, although some may have had underground combustion chamber(s) (Hammade and Yamazaki 2006: 28–29, 32–35). No direct evidence for kiln superstructure was recovered; however, a peg-shaped stone with blackened end, which could have been a device for closing a "damper," provides indirect evidence for the superstructure, and I tentatively suggest that these were updraft kilns, the chambers of which had domed roofs.

Several kilns of unique type were built during level 4. In fact, level 4 witnessed changes in both kiln design (evidence of attempts to experiment with or refine the standard kiln structure) and ceramics. The former are exemplified by the use of underground combustion chambers in the kilns with the double semi-oval and the elongated oval plans. While only the brick-laid foundation levels remain of the octagonal kiln, this may indicate that superstructure was also made of brick. The unique kiln types utilized in level 4 did not continue into level 3, where only the more common oval kiln structures were found.

[8] One of these is too small to have been of practical use, and a symbolic meaning is suggested (Hammade and Yamazaki 2006: 406).

[9] This "kiln" is quite small (almost half the size of the other kilns) and might have served multiple functions.

oi.uchicago.edu

Table 19.1. The kilns from Tell al-'Abr

Kiln Number	*Shape*	*Inner Dimension (m)*	*Remarks*
K7-1	Horseshoe(?)	0.8 × ?	—
K7-2	Horseshoe	0.9 × 1.0	Clay protection
K7-3	Oval	0.9 × 1.3	—
K7-4	Piriform	0.6 × 0.9	—
K7-5	Horseshoe	0.9 × 1.0	*Tannur* for bread(?)
K6-1	Oval	0.8 × 0.9	—
K6-2	Horseshoe	0.9 × 1.0	Tiny enclosure
K6-3	Horseshoe	1.10 × 1.35	—
K6-4	Horseshoe	1.25 × 1.80	—
K6-5	Oval	0.90 × 1.25	—
K6-6	Oval	0.9 × 1.4	Possibly double chamber
K5-1	Horseshoe	1.15 × 1.30	Rectangular enclosure
K5-2	Horseshoe(?)	1.25 × 1.80	—
K5-3	Horseshoe	1.00 × 1.25	Enclosure(?)
K4-1	Horseshoe(?)	1.25 × 1.80	Square enclosure
K4-2	Octagonal	1.35 × 1.55	—
K4-3	Horseshoe	1.1 × 1.8	Square enclosure
K4-4	Horseshoe	1.1 × 1.4	Rectangular enclosure
K4-5	Elongated oval	1.0 × 2.5	—
K4-6	Horseshoe	1.2 × 1.7	—
K4-7	Horseshoe	1.2 × 1.5	Rectangular enclosure
K4-8	Horseshoe	1.1 × 1.5	Enclosure
K4-9	Horseshoe	0.85 × 1.00?	Enclosure
K4-10	Double oval	0.95 × 1.90 × 2 (units)	Double chamber
K3-1	Horseshoe	1.00 × 1.25	Large enclosure
K3-2	Horseshoe	1.35 × 1.80	Square enclosure
K3-3	Oval	1.1 × 1.5	—

DISCUSSION

In the different levels at Tell al-'Abr, the location of individual structures within the settlement was generally defined by functional or environmental issues. However, a strictly functional division is not always the case: in the case of structures in level 7 and level 3, there is evidence for both domestic and manufacturing activities taking place within the same building complex, and there appears to have been little concern to maintain a strict division of space according to function in these levels. From level 6 to level 4, all the structures found within the excavation area appear to relate to ceramic production, suggesting that the domestic areas were located somewhere in the unexcavated eastern part of the site. This increasingly clear separation between the loci of manufacturing and those of domestic activities may indicate an intensification of ceramic production in the later levels.

oi.uchicago.edu

The workshops are usually of rectilinear form, and their features, which can include paved floors or built-in installations, appear to confirm their function. Small compartments in which potters' tools were kept tidy demonstrate the arrangement of the workplace. Such details of "professional" ceramic production at Tell al-'Abr suggest that the site was operated intentionally with the aim of producing a surplus of durable pottery for trade. If we consider the number of kilns and their capacity, we can then estimate the scale of the manufacturing operation. As noted above, there were three kilns in levels 3 and 5, four in level 7, six in level 6, and ten kilns in level 4. It is not certain that all kilns were in use simultaneously, especially in the case of level 4. However, it is likely that all kilns were used more than once a year.

The precise capacity of each kiln remains uncertain, but estimates can be made from the inner dimensions of the floor and with reference to ethno-archaeological studies (Tsuneki 2004). According to the latter analysis, the capacity of an updraft kiln with a domed roof is a minimum of 1.3 cubic m (with a floor diameter of 1.2 m) and a maximum of 2.6 cubic m (with a floor diameter of 1.5 m). According to Tsuneki (2004: 226), the former could have held 184 Halaf bowls of diameter 20–30 cm and height 6–10 cm,[10] the latter 1,380 vessels. While these data cannot be applied directly to Tell al-'Abr, the dimensions of the Halaf kilns are sufficiently similar to provide an indication of the potential outputs at the site. Assuming that each kiln was operated several times a year, it is not hard to imagine that production was on a relatively large scale. Any such production would have far exceeded local demand, and I suggest that the surplus output represented a commercial activity undertaken by specialized groups of workers.

THE POTTERY

General Features of the Tell al-'Abr Pottery

It should be noted that in all levels the Ubaid pottery from Tell al-'Abr is almost entirely mineral tempered. Small particles of sand and lime are the usual tempering materials, while chaff temper is observed only rarely. Firing was usually well controlled and the fabric well oxidized. Surface color was generally buff, while the core sometimes revealed a light orange tone. Most painting was executed in matte black or brown, with hematite and manganese used as pigments.

Four Stages of the Tell al-'Abr Ubaid Pottery

As reported in our previous publication, a four-stage ceramic chronology has been proposed for Tell al-'Abr (Hammade and Yamazaki 2006). The transitions between the four stages are marked by quantitative, technical, and typological changes. Chronological development takes the form of a gradual shift between stages rather than abrupt breaks. These four stages can be grouped into two main divisions, which roughly correspond to early and late northern Ubaid periods as these are generally understood. A brief overview of the 'Abr pottery follows:

Stage I (Levels 7 and 6) (fig. 19.5)

A high proportion of the painted pottery is one of the common features among early northern Ubaid sites. This is also the case at Tell al-'Abr, where an extremely high percentage of painted pottery (90%) was observed. This stage shows a significant degree of influence from Halaf painted pottery, with various painted motifs familiar from Halaf ceramics in common use. As is the case with other early northern Ubaid specimens, these painted decorations were applied to the "Ubaid" fabric. Such specimens fall into the "Halaf–Ubaid transitional" category, but Stage I material reveals more Ubaid-based features.

The basic assemblage of the 'Abr Ubaid is represented by *Zebdiyye* (fig. 19.5:1–2), a deep bowl with a ring base. The most recognizable painted design is cross-hatching executed in a single pattern. The neckless, globular jar

[10] This nearly corresponds to the size of the bowls with scraped bottoms that occur at Tell al-'Abr.

oi.uchicago.edu

with ring base (fig. 19.5:3) is related to the Zebdiyye form, and the painted design is composed of cross-hatching and other simple geometric motifs of kinds that are applied in a similar manner to that of Zebdiyye. There is another deep bowl type of similar profile to Zebdiyye, but these are decorated in a different style of painted motif (fig. 19.5:4). While the variation in the painted motifs applied to the two former vessel types is limited, they may bear more elaborate painting. Vessels with particular designs such as eye motifs (fig. 19.5:2) suggest the existence of a pottery with a symbolic function.

Painted bowls (fig. 19.5:5–6), of forms in addition to those mentioned above, are also common in this stage. Among the various types, one with a slight carination on the lower body can be classified into the same category as the so-called Mefesh bowl (fig. 19.5.7–8). There is also another related form, a shallow, carinated bowl with a wide-opened rim, which could be a modified form falling between the Mefesh bowl and the so-called bell-shaped bowl. Examples similar to the Mefesh bowl were found primarily in level 7, while the shallower type was found primarily in level 6. These vessel forms appear to provide evidence of contact with regions to the east; the differences are believed to be local modifications.

The necked jar also shows great variety. Though fewer necked jars were recovered, some types show characteristic features that can be compared to specimens from other regions. For instance, an intact jar from level 7 (fig. 19.5:11) demonstrates a strong similarity in both its proportions and the painted design to a large necked jar from Mefesh (Mallowan 1946: fig. 8.8), though the example from Tell al-'Abr is much smaller. The influence of the Halaf ceramic tradition can also be recognized in some specimens recovered at Tell al-'Abr. The incurved-necked jar (fig. 19.5:10) might have originated from the "bow-rim" jar of the Halaf, but the specimens from Tell al-'Abr exhibit different proportions and usually have double handles. In addition, examples from Tell al-'Abr occur as both plain and painted vessels. These specific features may be diagnostic for the early stage of Tell al-'Abr (and it is worth noting that unpainted pottery makes up less than 10% of the collection from Stage I). Some forms, which are seen in Stage II, might find equivalents in this stage, though the manufacturing technique is different.

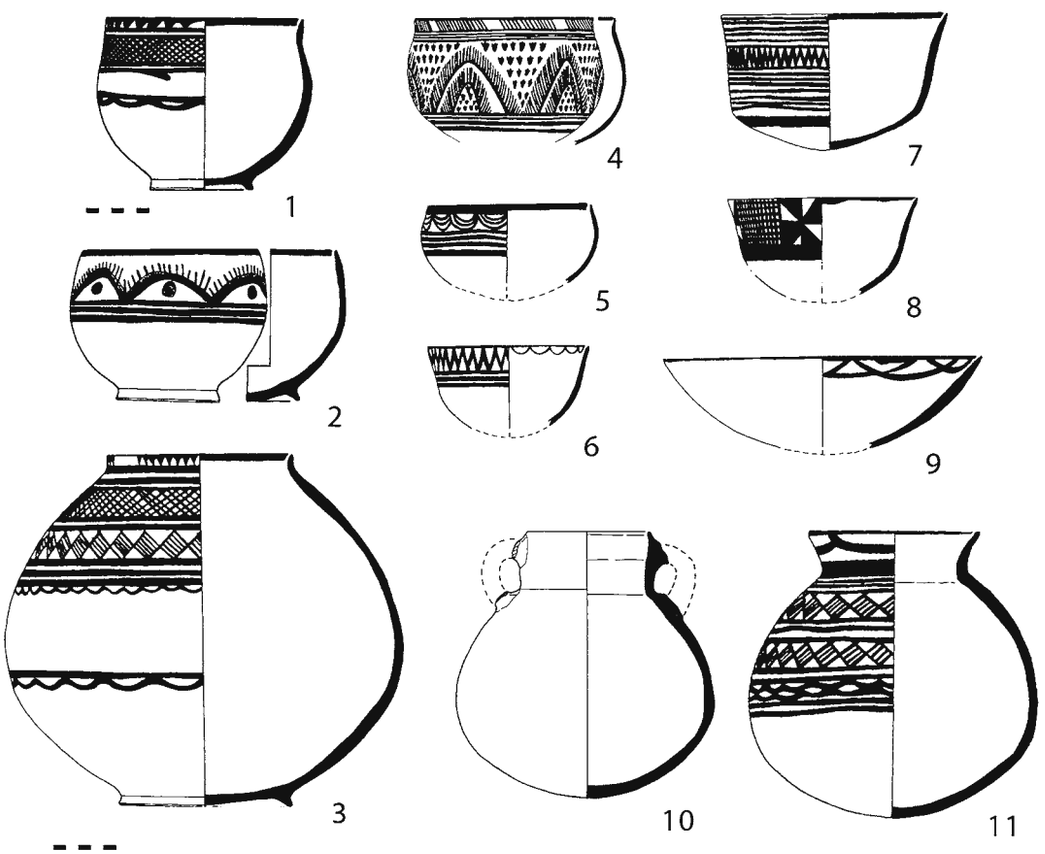


Figure 19.5. Pottery from Stage I

oi.uchicago.edu

Stage II (Intermediate Level and Level 5) (fig. 19.6)

The ceramics from Stage II exhibit a combination of elements from Stage I and several new features. The introduction of the latter to the assemblage seems to have progressed steadily and gradually. In addition to a decrease in the proportion of painted pottery, the painting style itself was changed, with designs becoming less intricate, though not as simple as those of Stage III. The most frequent motif was wavy lines, which was used on open bowls.

Among the new elements, the three types of bowl with a scraped bottom (fig. 19.6:7–10) are of particular importance from a technical standpoint. The following Arabic names have been given to the three main forms: *Qudsiyye*, *Sultaniyye*, and *Sahfe,* which correspond to inturned bowl, deep-open bowl, and flaring bowl, respectively. All these demonstrate scraping on the bottom as well as regular striations under the rim resulting from careful horizontal smoothing. The scraped part was often subsequently smoothed carefully, although a substantial number of specimens were scraped but left unsmoothed. These bowls are generally unpainted, but some Sahfe examples had been painted with solid pendant loops. The fabric is usually mineral tempered and well oxidized. As a form, Qudsiyye-type bowls exist in Stage II (Hammade and Yamazaki 2006: pls. 6, 19, 33), and Sahfe could be a substitute for carinated shallow bowls with wide-opened rims. Zebdiyye vessels continue to be present (fig. 19.6:2); however, these are no longer the predominant style. Single-pattern decoration has decreased in frequency, and various painted motifs are now applied. The profiles of the vessels tend to be straight rather than S shaped. In addition to the decrease in the frequency of the Zebdiyye, other types that had been common in the previous stage, such as the neckless globular jar with ring base and the deep bowl with elaborate designs, are no longer present during Stage II.

The "cup-like vessel" is one of the characteristic ceramic types of Stage II (fig. 19.6:1). Among several variations of this type, a form with a wide-opened rim and a pointed bottom may have both "local" and "non-local" versions. The "non-local" version is distinguished by its thin wall, tapering rim, and less dense fabric, which is quite different from the other pottery found at Tell al-'Abr. Some of these "non-local" ceramics are similar to examples from Tell Kashkashok in the eastern Jazira. The "cup-like vessel" might be related to the "bell-shaped bowl" or to carinated bowls of the earlier stage, but a degree of more local modification was achieved in terms of both shape and painted design. While the "cup-like vessel" bears many distinctive features, this type was not particularly common. However, medium-sized, open, painted bowls increased in frequency in Stage II.

The "solid-made" necked jar is another type that occurs for the first time in Stage II (fig. 19.6:6). The term "solid-made" is but a provisional name, and this class of vessels is distinguished by a shape that is more symmetrical and better formed than are other necked jars. It seems to have been formed by rapid rotation, which also appears

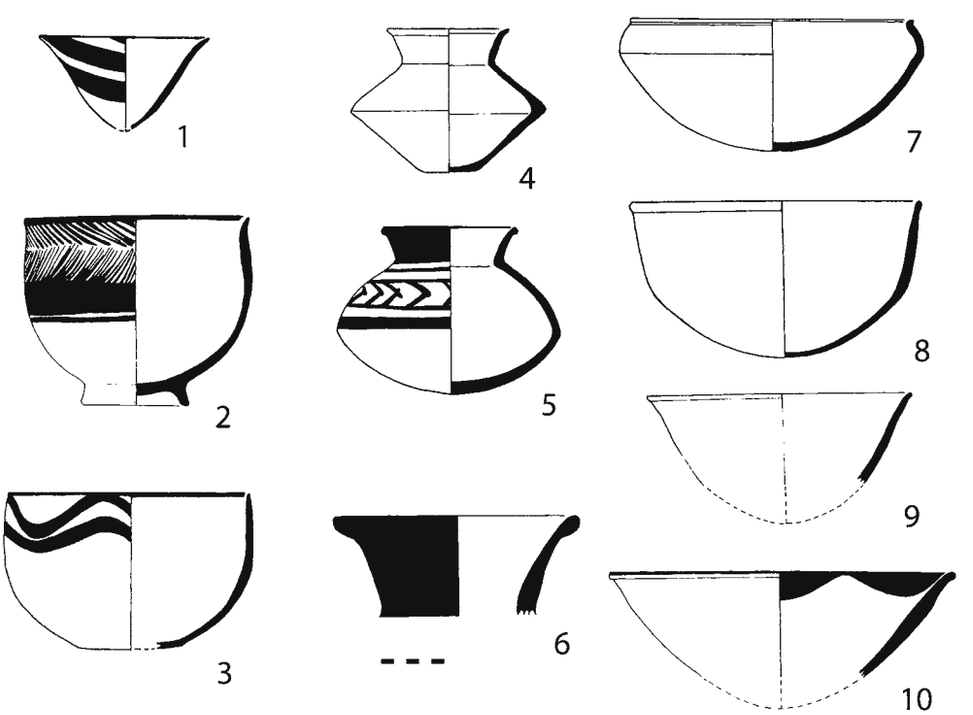


Figure 19.6. Pottery from Stage II

oi.uchicago.edu

to be true for the bowls with scraped bottoms. The "solid-made" necked jars often have a modeled rim, such as a beaded or thickened form, and paint is applied to the whole neck when it is painted. These jars make up only a small proportion of the necked jars at the site, but they form a distinctive type within the assemblage. A small number of sherds bearing bichrome paint were collected, mainly from level 5. The secondary colors are usually orange and purple and are used simply to fill the spaces that are bordered in black paint.

Stage III (Levels 4 and 3) (fig. 19.7)

The basic characteristics of Stage III are noticeably different from the previous stages. Throughout level 4, painted pottery made up more than half the entire assemblage, but by the end of this stage, painted pottery made up only one-quarter of sherds recovered. Painted bowls are mostly represented by the open-bowl type in Stage III (fig. 19.7:1–2); other types of painted bowl were found only in very small quantities.

Elements such as the Zebdiyye and several other types of carinated bowls disappear entirely, distinguishing this Stage III from the preceding stages, and bowls with scraped bottom are the predominant form. The Sahfe and Sultaniyye types now include additional minor variants, while the Qudsiyye type has fewer variations (fig. 19.7:8–10). It is also worth mentioning that there are a few examples of large, plain, neckless jars that bear traces of scraping on the body (fig. 19.7:11). Traces of scraping are usually covered by careful smoothing, but they appear to have used the same surface treatment as did other bowls with a scraped bottom. By the end of Stage III, some types of plain vessel appear to have progressed to a point of standardization. "Cup-like vessels" continue to be present in Stage III (fig. 19.7:3–4). Thus, even though Stage III is distinctive, there are also elements of continuity from previous stages.

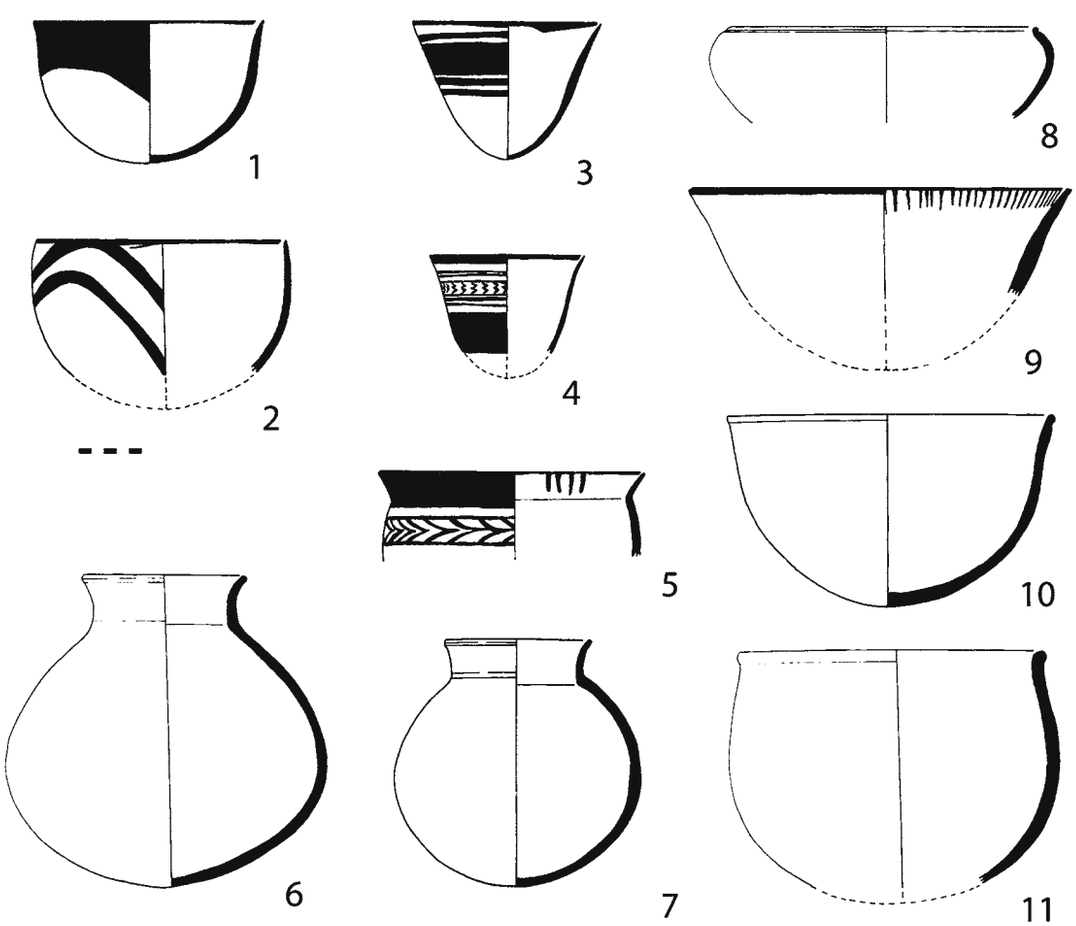


Figure 19.7. Pottery from Stage III

oi.uchicago.edu

Stage IV (Level 2) (fig. 19.8)

This is the most recent stage of the Tell al-'Abr Ubaid sequence. The Stage IV assemblage is almost the same as that of Stage III. However, there is a sharp decline of painted pottery in terms of both variation and quantity. Conversely, the frequency of the "roughly finished" variant of the bowls with scraped bottoms increases, particularly that of the small Sultaniyye type. As a specific group, several small painted bowls, miniature bowls that may not have been intended for daily use, were recovered from the domestic area B 2.1 (fig. 19.8:1). Their painted design is composed of pendant loops on the interior surface of the vessel, and some form a six-pointed star.

Of the two jars used for burials, the painted one is a neckless, globular jar with a ring base (fig. 19.8:9). Unlike that of Stage I, the rim is more widely everted, and the painted design is more specific at this stage, being composed of pairs of solid triangles and horizontal parallel lines. There is another plain, neckless jar that served for burial purposes, so there was no exclusive association between painted vessels and mortuary functions. Since both the quantity and forms of painted pottery are extremely limited in this level, one might suggest a symbolic use for painted pottery at this stage.

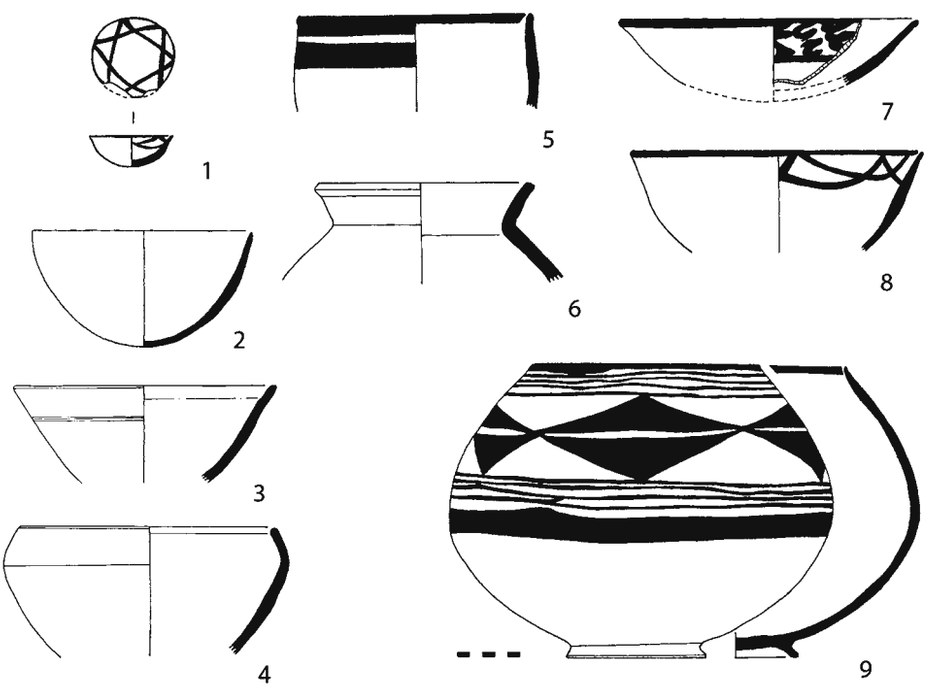


Figure 19.8. Pottery from Stage IV

DISCUSSION

The "Simplification" of Ceramic Style

Throughout pottery Stages I through IV, we can discern several general trends among the ceramic assemblage from Tell al-'Abr. The most noticeable of these is a shift from "complicated" to "simple" styles of painted decoration, or from painted to plain pottery. Both could be abbreviated by the single term "simplification." This is the process that Wengrow (2001) has called the "evolution of simplicity." In order to better understand what this "simplification" actually reflects, it is useful to examine simplification as a process and to consider how this might have been related to developments in the ceramic industry at Tell al-'Abr.

Regardless of its function, the painted pottery from the early pottery stages at Tell al-'Abr would have been time consuming to produce. Much of the painted pottery from Stages I and II has a refined appearance, which might indicate that it had some specific value; it may even have fallen within a category of "luxury items."[11] In addition, some

[11] An elaborate bichrome jar from the contemporary levels of Kosak Shamali is one of the most prominent examples and is currently on display at the Aleppo Museum.

oi.uchicago.edu

vessels bore motifs, such as the eye motif, that may have had some symbolic value in terms of the spiritual expressions of the period. The majority of the ceramics comprised vessels of distinct styles with patterned designs, such as the Zebdiyye and the neckless globular jar, many of which displayed motifs based upon cross-hatching. The designs occurring on Zebdiyye were rather repetitious, even monotonous and less "specific." However, they were still applied skillfully to the vessels and would have been time consuming to execute.

Important groups of unpainted pottery appeared in Stage II, while painted pottery was still predominant. In Stage III, however, the frequency of painted pottery declined significantly, with some types no longer in production, perhaps having been replaced by undecorated forms. This process appears to indicate a divergence from the previous tradition represented by labor-intensive painted ceramics.[12] While during Stage II the traditional style and "new" plain style (including a simple painted style) had existed together, Stage III witnessed a clear decline of the labor-intensive types. In this sense the change between Stages II and III was very marked. Whatever the reason for this transformation, the evidence of the kilns indicates that ceramic production remained an important activity during level 4 and was not reduced in scale until level 3 at the earliest. Thus changes in pottery styles do not appear to have impacted upon the scale of ceramic production at Tell al-'Abr. However, the process of "simplification" would have reduced the labor inputs required to maintain any given level of output, and the result may have been to free up human labor for the development of other activities and industries, as documented in level 3, where it is clear that ceramic production continued.

This process of "simplification" was not restricted to Tell al-'Abr, but appears to have formed part of a broader trend (Karsgaard this volume; Wengrow 2001). This may represent the beginnings of vessel standardization, and perhaps of a measuring system reflecting a wider horizon of ceramic exchange. This is one of the most important issues relevant to the later stages of the Chalcolithic period, but further consideration lies beyond the scope of this paper.

The Acceptance of Bowls with Scraped Bottom at Tell al-'Abr

The so-called Coba bowl, a form of bowl with a rough flint-scraped bottom, is often seen as an indicator of a "Post-Ubaid" phase. However, the evidence from Tell al-'Abr offers another interpretation of the issue. The bowls with scraped bottoms from Tell al-'Abr have, as noted above, similarities to the Coba bowls, but there are also significant differences. These are as follows:

1) the Tell al-'Abr bowls are mineral tempered;
2) they commonly exhibit well-oxidized firing — black cores are not present; and
3) the scraped part of the vessel was often smoothed subsequently, leaving only faint traces of the actual scraping.

It is also worth noting that the initial appearance of bowls with scraped bottoms at Tell al-'Abr was in level 5, the ceramics from which still retained many "early" features. This means that a specific "rough-scraping treatment" began to appear during the last phase of the early northern Ubaid, even though it was still uncommon at that point. The scraping technique is one of several new ceramic elements first documented in level 5. These changes are thought to have resulted from the contact with a new movement that formed a distinct local Chalcolithic culture in the north and northwest of Syria. Further research should clarify whether these changes do reflect the presence or formation of a distinctive local Chalcolithic culture as early as the end of the early northern Ubaid, and to what extent bowls with scraped bottoms are typical of this culture.

There is a further issue concerning the vessel forms. If both scraped-bottom Qudsiyye and Sahfe correspond to vessels from earlier stages, then it is clear that these vessel forms were maintained within the assemblage through several successive stages, although a different method of manufacturing was utilized. This distinctive ceramic group was modified into a "Tell al-'Abr style" and continued in use throughout the final stage at the site. In this context, the acceptance of the flint-scraping technique marks the beginning of change in the assemblage, although this factor alone is not sufficient to explain the division between periods at the site.

---

[12] A Zebdiyye with single-pattern decoration from Stage I might embody a new idea, a kind of mass production. However, this vessel still bore a style of painting that would have been "time consuming" to produce.

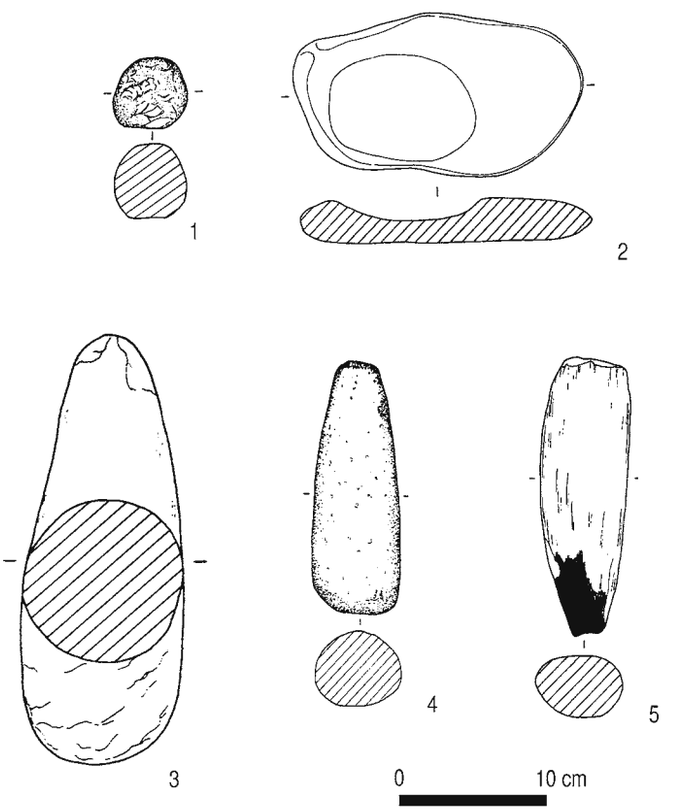
oi.uchicago.edu

THE SOCIETY OF UBAID-PERIOD TELL AL-'ABR

I believe that from its very inception the pottery produced at Tell al-'Abr, the painted pottery in particular, was intended not for purely domestic consumption but also for exchange. Its quality, though perhaps not matching that of earlier Halaf painted pottery, was sufficiently high to allow it to serve as a commodity for exchange, and during the early period the pottery produced at Tell al-'Abr might have occupied a position as a product for exchange similar to that once held by Halaf pottery. While the zone of exchange for the Tell al-'Abr ceramics cannot be defined on the available evidence, I believe it reasonable to assume that it was distributed within the area close to the site.

In the later period demand for pottery appears to have focused upon less-highly decorated material. However, production was not reduced because of this shift, and the ceramic industry remained at least as active as it had been in the earlier period. Although pottery styles became simpler, the quality of the material, and thus presumably its value as a commodity for exchange, was maintained, and the manufacturing process appears to have been well controlled.

However intensive ceramic production may have been, life at Tell al-'Abr would have been centered upon subsistence agriculture. The abundance of sickle elements demonstrates that agriculture remained the primary means of support for the population (Hammade and Yamazaki 2006: 327–28). Artifacts representing other domestic crafts



1. Stone Pounder
2. Stone Palette
3. Stone Pestle (Limestone)
4. Stone Pestle (Basalt)
5. Peg-shaped Stone (Fire Regulator?)

Figure 19.9. Potters' tools from the Ubaid levels

oi.uchicago.edu

such as weaving (Hammade and Yamazaki 2006: 403) are also very common among the finds, while other artifacts commonly found in Chalcolithic contexts appear to have been used as potters' tools (fig. 19.9).

The Tell al-'Abr ceramic industry, while technically sophisticated, would have been incapable on its own of providing the main economic basis for the community. Clearly, "specialization" was a gradual process that developed in stages and may, in its later phases, have culminated in profound social reorganization. However, it would be overly simplistic to consider Ubaid society at Tell al-'Abr as representing the first stage, the "onset," if you will, of a developing "complex society." The evidence from Tell al-'Abr has provided one particular case in which we see the development of specialized manufacturing. However, Ubaid settlements elsewhere may have undergone rather different developments, a wide range of which might have been capable of driving significant social change.

In this paper I have tried to describe one of the regional aspects of the Ubaid through a consideration of the pottery and the ceramic industry at Tell al-'Abr. When discussing the early stage, the "intrusion" of the Ubaid phenomenon (whatever this might have meant) to the area cannot be explained just as simple "contact." The Ubaid ceramic style did not represent an influx of a particular cultural element, but was rather part of a wider process by which the previous Halaf way of life was gradually superseded. The evidence here is insufficient to account for a whole range of this process, although we might suspect that the community at Tell al-'Abr, with its riverine location, was well placed to play a part in the wider process.

The wave of "intrusive" features was not restricted to the early stage. The cultural transformation of the later Ubaid stage was also activated by intermittent movements, and over time it led to the development of a local Chalcolithic culture. It is not certain whether Tell al-'Abr was completely integrated within this world — although the sequence suggests that its "identity" was maintained for an extended period. This point may be germane to discussion of the terms "Ubaid-like" and "Ubaid related," which, while perhaps useful for indicating the extent of the Ubaid phenomenon, do not really say much about the character of the communities concerned. If the Ubaid world was bound by very loose ties, then we should expect each "Ubaid-like" culture to have been formed in a distinct regional context. Tell al-'Abr provides some insights that may be helpful in understanding this issue, and further research should enable us to better contextualize these local processes within a larger regional framework.

ACKNOWLEDGMENTS

This paper is a revised version of a presentation of the same title, delivered at the Ubaid Conference at the University of Durham, in April 2006. I am very grateful to Robert Carter and Graham Philip for all their efforts and for their support in our participation in the conference and our contributions. I would like also to express my heartfelt thanks and appreciation to Dr. Hamido Hammade, the director of the excavations at Tell al-'Abr and my co-presenter at the conference, for his advice regarding this paper. Warmest thanks go also to Mr. William Reynolds for his effort to improve my English. However, I alone am responsible for the views expressed and any mistakes made.

BIBLIOGRAPHY

Akkermans, Peter M. M. G.

1988 "An Updated Chronology for the Northern Ubaid and Late Chalcolithic Periods in Syria: New Evidence from Tell Hammam et-Turkman." *Iraq* 50: 109–46.

Cauvin, Marie-Claire, and M. Molist

1987 "Prospection néolithique sur le haut Euphrate syrien." *Annales archéologiques Arabes Syriennes* 37/38: 78–90.

Hammade, Hamido, and Yayoi Yamazaki

2006 *Tell al-'Abr (Syria): Ubaid and Uruk Periods*. Association pour la promotion de l'histoire et de l'archéologie orientales, mémoires 4. Louvain: Peeters.

oi.uchicago.edu

Hole, Frank

2000 "The Prehistory of the Khabur." In *La Djéziré et l'Euphrate Syriens de la protohistoire à la fin du II^e millénaire av. J.-C.: Tendances dans l'interprétation historique des données nouvelles*, edited by O. Rouault and M. Wäfler, pp. 17–27. Subartu 7. Turnhout: Brepols.

2001 "A Radiocarbon Chronology for the Middle Khabur, Syria." *Iraq* 63: 67–98.

Kubba, Shamil A. A.

1998 *Architecture and Linear Measurement during the Ubaid Period in Mesopotamia*. British Archaeological Reports, International Series 707. Oxford: British Archaeological Reports.

Mallowan, M. E. L.

1946 "Excavations in the Baliḫ Valley, 1938." *Iraq* 8: 111–59.

Nishiaki, Yoshihiro, and Toshio Matsutani, editors

2001 *Tell Kosak Shamali: The Archaeological Investigations on the Upper Euphrates, Syria*, Volume 1: *Chalcolithic Architecture and the Earlier Prehistoric Remains*. University Museum, the University of Tokyo Monograph 1. Tokyo: The University Museum, University of Tokyo; Oxford: Oxbow Books.

2003 *Tell Kosak Shamali: The Archaeological Investigations on the Upper Euphrates, Syria*, Volume 2: *Chalcolithic Technology and Subsistence*. University Museum, the University of Tokyo Monograph 2. Tokyo: The University Museum, University of Tokyo; Oxford: Oxbow Books.

Sanlaville, Paul

1985 *Holocene Settlement in North Syria: Résultats de deux prospections archéologiques effectuées dans la région du nahr Sajour et sur le haut Euphrate syrien*. British Archaeological Reports, International Series 238. Oxford: British Archaeological Reports.

Thuesen, Ingolf

2000 "Ubaid Expansion in the Khabur: New Evidence from Tell Mashnaqa." In *La Djéziré et l'Euphrate Syriens de la protohistoire à la fin du II^e millénaire av. J.-C.: Tendances dans l'interprétation historique des données nouvelles*, edited by O. Rouault and M. Wäfler, pp. 71–79. Subartu 7. Turnhout: Brepols.

Thureau-Dangin, F., and Maurice Dunand

1936 *Til Barsib*. Bibliothèque archéologique et historique 23. Paris: P. Geuthner.

Tsuneki, A.

2004 *Halaf bunka no kenkyu*. Tokyo: Doseisha. [In Japanese]

Wengrow, David

2001 "The Evolution of Simplicity: Aesthetic Labour and Social Change in the Neolithic Near East." *World Archaeology* 33: 168–88.

oi.uchicago.edu

20

THE UBAID IN THE BALIKH VALLEY, NORTHERN SYRIA: BALIKH PERIODS IV–V

MARIA GIUSEPPINA TRENTIN, *Rijksmuseum van Oudheden, Leiden*

INTRODUCTION

In the Balikh Valley, deposits producing Ubaid-related pottery were exposed in a step trench excavated on the eastern slopes of Tell Hammam et-Turkman (Meijer 1988: 69–73). This site provided a long Ubaid sequence through what was termed Period IV (Akkermans 1988a). However, ceramics painted in the Ubaid style were also recovered from the earlier levels of the following phase, and this assemblage presented certain peculiarities that were believed to represent the beginning of a new period, Period V (Meijer 1988: 74–75; Akkermans 1988b: 300–02).

Within the step trench, more than eleven distinct strata were assigned to Period IV, forming an accumulation of some 15 m of occupational debris. The strata were grouped into four separate phases on grounds of both stratigraphy and artifact typology. These were termed Phases IVA, B, C, and D (Akkermans 1988a: 181–82). Four more levels were attributed to the early Period V, Phase VA (Akkermans 1988b: 287–88).

In the course of the excavations, it was observed that episodes of erosion of unknown duration had often intervened following the demise of the buildings. Nevertheless, the ceramic sequence appeared to indicate an uninterrupted local development (Akkermans 1988a, 1988b: 204, 216–17, 1988c: 288, 304). In particular, a smooth transition between Periods IV and V was well documented, and the "Hammam V pottery" was believed to have "developed locally along gradual lines out of Hammam IV ceramics" (Akkermans 1988b: 288). However, the situation at the beginning of the long span of time that is under consideration here was rather different. Period IV was distinguished from the earlier Period III ceramics assemblage by the appearance of a new type of pottery, of which both painted and plain forms occurred.[1] Since the excavation did not reach virgin soil in the step trench, it was suggested that additional, earlier Period IV deposits may have been buried deep within the mound (Akkermans 1988a: 181).[2]

DATING CRITERIA AND LIMITATIONS OF THE INQUIRY

The aim of this paper is to provide an initial review of the development of settlement in the Balikh Valley during the span of time defined by Period IV and the beginning of Period V at Hammam et-Turkman. It is, therefore, vital to have adequate criteria for dating assemblages recorded from other sites during the Balikh Survey (= BS) (see, e.g., Akkermans 1993: 146–60). These criteria are provided by the evidence from the Hammam step trench,

[1] In the excavated regional sequence, Period IV was preceded by Period III, in particular Phase IIID, and remains of the latter were excavated at another site in the valley, Khirbet esh-Shenef, where Halaf pottery constituted the dominant element of the assemblage (Akkermans 1993: 86–109, 112). Neither in the deepest levels of the Hammam step trench, nor in a small cut that was opened in another Balikh site, Tell Mefesh (BS138), was there unambiguous evidence for the presence of true Halaf pottery in situ (Mallowan 1946: 126–29, 144; Akkermans 1988a: 181, 1993: 121–23). Rather, the following observation would seem to apply to the Phase IVA painted pottery from the last two sites. The repertoire of shapes and the techniques of manufacture differed from those typical of the Halaf tradition and instead belonged to the local, Ubaid-related tradition of pottery making. Some Halaf motifs were still employed, especially on the finest containers, but the design configuration did not correspond to that of Period III (Akkermans 1988a: 222).

[2] Halaf levels of occupation may have existed below the Phase IVA deposit even at Tell Mefesh, but these were not excavated (Mallowan 1946: 129).

oi.uchicago.edu

which provides quite good chronological resolution, a fact strengthened by Hamman having been one of the most important sites in the area.

The periodization of units within Hammam Periods IV and V was undertaken using clusters of ceramic forms, the life spans of which appear to be limited according to their vertical distribution within the stratigraphy of the step trench (Akkermans 1988a: 204–15, tables 34–35, 1988b: 304–10, tables 51–52). Indeed, there seems to be a cluster of pottery types whose distribution was limited to Phase IVA,[3] while several shapes were common primarily to Phases IVA and IVB.[4] Two more groups are characteristic of Phases IVC[5] and IVD,[6] respectively, and there are also forms common to both phases.[7] In short, two clusters of ceramic forms were distinguished that appeared to belong to the early and late Period IV, respectively. Hence it was concluded that Period IV could be divided into two broad chronological phases on the basis of the development of pottery types in the step trench.[8]

Phases IVA–B and IVC–D are distinguished in terms of ceramic technology (Akkermans 1988c: 125–27). Important technical innovations characterize the Phase IVC ceramics, innovations that were confirmed in the following Phase IVD and continued to impact upon ceramic production during early Period V (Akkermans 1988a: 187–98, 1988b 291–300). The key difference was that in the later phases the assemblage was increasingly dominated by chaff-tempered wares, the presence of which reached a peak in Phases IVD and VA, while the mineral-tempered fabrics typical of Phases IVA–B occurred in ever-decreasing numbers, almost disappearing in Phase IVD (Akkermans 1988a: tables 20–21). While one is clearly dealing with a continuum, the shifting proportions between chaff- and mineral-tempered fabrics provide a criterion that allows assemblages to be placed in the earlier or later part of Period IV.[9] Assemblages characterized by mineral-tempered wares are more likely to belong to the earlier part of the period, while those dominated by chaff-tempered fabrics are more likely to date to the later part of the period. Since many shapes persist from the late Period IV, especially IVD, into Period V,[10] the presence of a new set of forms, the distribution of which was restricted to Phase VA, was taken to indicate that a given site was certainly inhabited at that point.[11] Finally, the aspects of the evolution of painting styles may provide an additional dating criterion, one that is particularly useful for distinguishing Phase IVA material from that of Phases IVB, C, and D.[12]

---

[3] Elaborately painted bell-shaped bowls (Akkermans 1988a: 207, 219–20, tables 34–35 n. 1070, pl. 68: 1–3); bow-rim jars (Akkermans 1988a: 201, 211, table 35 n. 3071, pl. 75:101–02); wide, carinated bowls with out-rolled or flattened lips (Akkermans 1988a: 208, table 35 n. 1080, pl. 71:46–51); bowls with sharply in-curving or carinated sides (Akkermans 1988a: 208, table 35 n. 1084, pl. 72:61–64); hole-mouth bowls (Akkermans 1988a: 207, table 35 n. 2082, pl. 69:25–26).

[4] Jars with a complex rim (Akkermans 1988a: 210, table 35 n. 3068, pls. 74:87–88, 78:147); jars with in-rolled lips (Akkermans 1988a: 210–11, tables 34–35 n. 3066, pls. 74:84–86, 79:152); cup-like bowls (Akkermans 1988a: 207, table 35 n. 1083, pl. 77:126–28); bowls with a pinched rim (Akkermans 1988a: 208, 210–11, table 35 n. 1062, pl. 72:65–68); ovoid hole-mouth pots (Akkermans 1988a: 209, table 35 n. 2002, pl. 73:75–77).

[5] Closed or open S-shaped bowls (Akkermans 1988a: 212, tables 34–35 n. 1020, pls. 83:179–82, 185–87, 84:188); jars with a beaked rim (Akkermans 1988a: 213, table 35 n. 3078, pl. 85:200); U-shaped pots with a ledge rim (Akkermans 1988a: 213, table 35 n. 2077, pl. 87:220–21).

[6] Steep-sided bowls (Akkermans 1988a: 214, table 35 n. 1015, pl. 91:259–60); steep-sided bowls with low carination (Akkermans 1988a: 215, pl. 92:265–66); low, S-shaped bowls (Akkermans 1988a: 214, pl. 92:268–69, 271); bowls with a concave rim (Akkermans 1988a: 214, pl. 92:267).

[7] Bowls with in-rolled lips and deeply incised interiors (Akkermans 1988a: 214, pl. 91:258); closed hemispherical or sinuous-sided bowls (Akkermans 1988a: 212, table 35 nn. 2074 and 2063, pls. 81:166–68, 82:170, 85:206, 89:244–45); storage jars with a swollen neck (Akkermans 1988a: 215, 231, table 35 n. 3021, pl. 85:204, 94:285–87).

[8] A pottery type is considered to be a composite entity, consisting of a shape fashioned with a particular ware by using a particular method of manufacture and receiving a particular surface treatment.

[9] Plain bowls with flaring or sinuous sides (Akkermans 1988a: 207, 211–12, 214, tables 34–35 n. 1059, pls. 68:4–12, 69:13, 16, 21–22, 24, 70:32, 34, 36–37, 77:130–33, 81:164, 82:172, 177, 89:242, 91:264); deep, hemispherical bowls (Akkermans 1988a: 207, 211–12, 214, tables 34–35 n. 1059, pls. 69:14, 18, 20, 70:28, 30–31, 39–40, 71:41–42, 72:52–53, 82:169, 173–76, 89:244–45); closed vessels with a sloping shoulder (Akkermans 1988a: 209, 212, 214, table 34 n. 2073, pls. 73:73–74, 86:216–17, 93:281–82).

[10] Deep, hemispherical bowls (Akkermans 1988b: 305, pls. 97:2–3, 5–8, 99:22); storage jars with an out-rolled rim (Akkermans 1988a–b: 214–15, 307, tables 35, 52 n. 2081, pls. 94:283–84, 102:59); jars with a beveled-ridged rim (Akkermans 1988a–b: 213, 307, table 35 n. 3023, pls. 85:203, 95:289, 103:65–66); low-collared, wide-mouthed pots (Akkermans 1988a–b: 215, 309, tables 35 n. 3045, pls. 95:293–96, 96:297, 103:67, 110:123–25).

[11] Coba bowls (Akkermans 1988b: 304–05, table 51 n. 1002, pl. 99:24–27); bowls with a beveled rim (Akkermans 1988b: 306, table 52 nn. 1046 and 1034, pls. 100:40, 101:41); bowls with an inward-beveled lip with a gutter (Akkermans 1988b: 306, table 52 n. 1022, pl. 100:38–39); bowls with a protruding rim (Akkermans 1988b: 306, table 52 n. 1004, pl. 100:31–36); jars with a squared-beveled rim (Akkermans 1988b: 307, table 52 n. 3024, pl. 102:55–58); gutter-rim hole-mouthed pots (Akkermans 1988b: 306, table 52 n. 2035, pl. 101:46).

[12] It may be of some interest to note that beyond the Balikh, the ceramics from Hammam IVA find many parallels with materials distributed over an area that extends from Tell Kurdu to Tell al-'Abr and Tell Kosak Shamali to Oylum (Akkermans 1988a: 221; Edens and Yener 2000: 202–03; Diebold 2000: 61; Hammade and Yamazaki 2006: 69–70; Nishiaki et al. 2000: 27, 31; Özgen, Tekin, and Helwing 1997: 63–64). In the Amuq and along the Euphrates, as in the Balikh sites, the pottery was collected in a series of excavated layers, where, if Halaf sherds occurred, they did so in minute quantities, that is, they may have been intrusive. Moreover, in the Tishreen Dam area, the pottery of interest was securely stratified beneath strata that yielded ceramics comparable to that of Hammam IVB. In the western distribution of Ubaid-related ceramics, known as Amuq E (Braidwood

oi.uchicago.edu

Pottery in a simple painted style, immediately recognizable as "Ubaid," was present in Phase IVA. However, alongside this and restricted to this phase was a busy, intricate style of painting that was employed to decorate the surfaces of the finest products of the Phase IVA potters (Akkermans 1988a: 201–02, pl. 68:1–12). A bolder, open and sweeping style of painting was, however, adopted in Phase IVB, and this was closely related to styles favored in Phase IVC and, to a lesser extent, Phase IVD, when widely executed designs and broad bands of solid paint became characteristic (Akkermans 1988a: 202–04, pls. 77:126–31, 81:164–68, 82:169–77, 89:244, 246).

Of course, caution is required when dealing with surface materials, and the nature of the available evidence is such that a degree of uncertainty was unavoidable when trying to assign a site to one phase rather than to another. It was felt that seeking to map settlement for each of the four phases of Period IV might require a degree of chronological resolution that would push the evidence beyond its capabilities. This risk was further highlighted by the existence of real differences in the quantity and quality of the samples from individual sites, and even between areas within the same site. Hence it was thought appropriate to distinguish between sites producing ceramics diagnostic of Phases IVA–B and those producing ceramics diagnostic of Phases IVC–D. While further refinements are theoretically possible (see next section), these must be considered in the light of two main caveats.

Among the pottery derived from the step trench, there were no rim profiles that could be attributed exclusively to Phase IVB (Akkermans 1988a: 211). Consequently, the Phase IVB sites were dated on account of the presence of rim sherds that were first attested in Phase IVA but continued into Phase IVB, and/or because of the occurrence of mineral-tempered sherds painted in the style that was introduced in Phase IVB, but that continued into Phases IVC–D. Obviously, the evidence is not as clear-cut as might be wished for, an observation that has some bearing also in the interpretation of the map of late Period IV settlement.

Many of the samples from the late sites contain material diagnostic of Phase IVC, but sherds of Phase IVD were observed only within a limited number of the same collections. Taken at face value, the evidence seems to suggest that fewer sites in the valley were occupied at the end of Period IV. However, this view is not compatible with the existence of several samples that produced "undiagnostic" late Period IV ceramics. Further caution is provided by the knowledge that absence of evidence is not evidence of absence, and the likelihood that, at least on some sites, evidence for earlier occupations may have been masked by extensive later overburden (Wilkinson 2003: 106–07). Hammam et-Turkman itself is a good example of this, as no fifth- or fourth-millennium B.C. materials were collected on its surface. This point should be borne in mind in the following discussion, for on all the maps Hammam ranks among the largest sites.

THE EARLY PERIOD IV BALIKH SETTLEMENT PATTERN (fig. 20.1)

Large sherd collections were recovered at Tell Zaidan (BS2), located in the southernmost part of the valley, close to the confluence of the Balikh and the Euphrates rivers, at Tell Mefesh (BS138), and at Tell as-Sawwan (BS147) in the middle of the valley; the best collection of Phase IVA ceramics comes from the latter site. Sizeable samples of similar finds are known only from Zaidan and Mefesh. Only very small quantities of Phase IVA diagnostics were recorded among the material from two sites in the southern part of the valley, BS35 and BS83, from BS167, close to Hammam, and from BS330, in the north part of the valley. Ceramic forms spanning both Phases IVA and IVB were scarce at all the sites.

Overall, the evidence suggests that eight mounds were occupied during early Period IV. They are likely to have been occupied continuously from Phase IVA to Phase IVB, and, judging by the surface material, the large sites (BS2, BS147) and medium-sized sites (BS35, BS83, BS138) had been occupied in their entirety as early as the preceding phase. Three such, Zaidan, Sawwan, and Mefesh, may have reached their maximum extent of occupation during Phase IVA. Sites measuring 1.5 ha or less are rare, and five hamlets (BS82, BS110, BS117, BS138, and BS235) appear to have been settled during Phase IVB, at the earliest.

---

and Braidwood 1960: 175–225, 511–12) or the Hammam, Phase IVA seems to exist as a separate ceramic horizon, and a degree of regional variability existed. However, the similarities at the interregional level are so numerous that the evidence from the aforementioned sites is quoted as an example of how useful it might be to widen the perspective taken in this paper.

oi.uchicago.edu

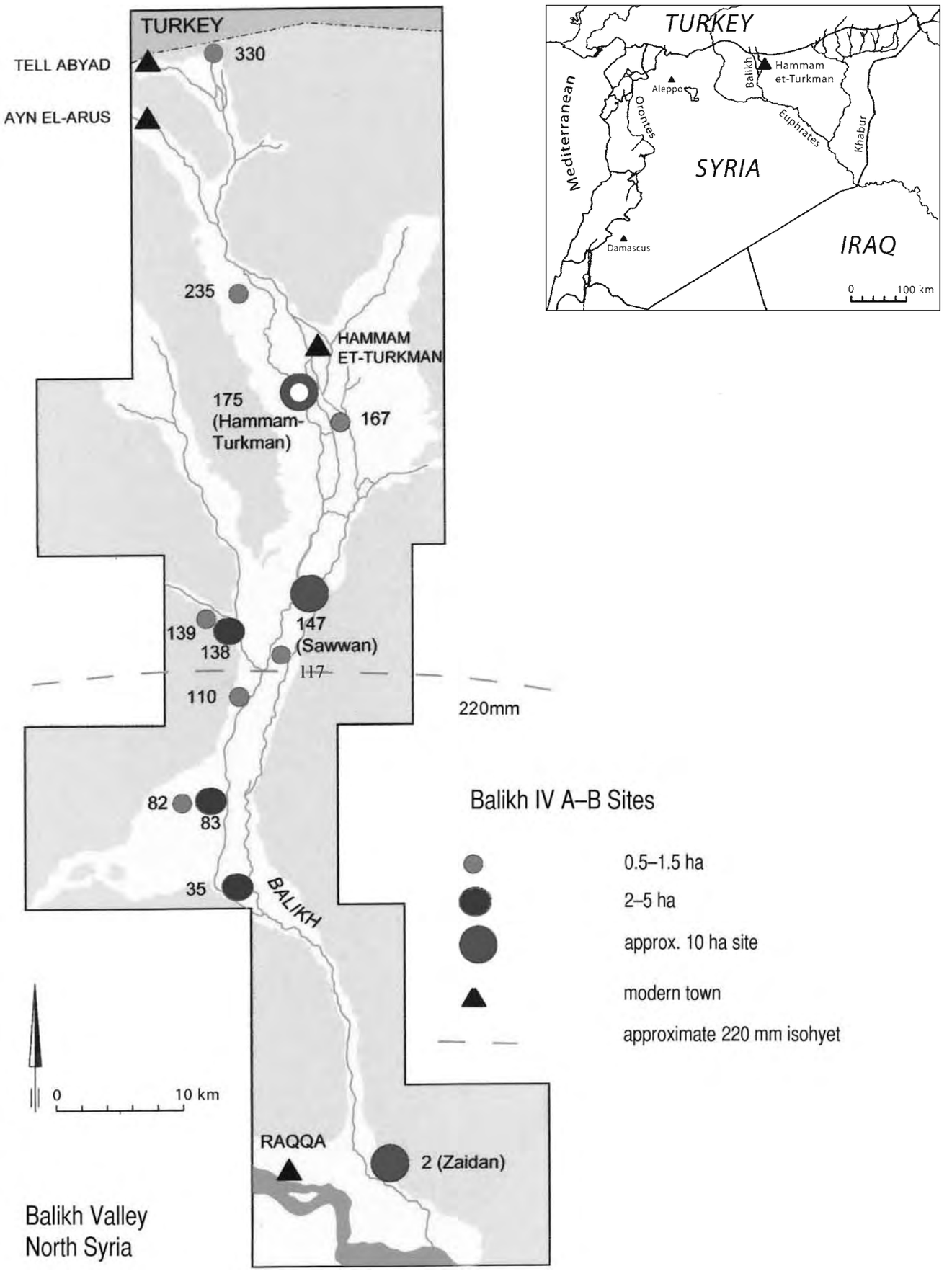


Figure 20.1. Map showing settlement in the Balkih Valley during early Phase IV.
Numbers assigned by Balikh Survey (BS)

oi.uchicago.edu

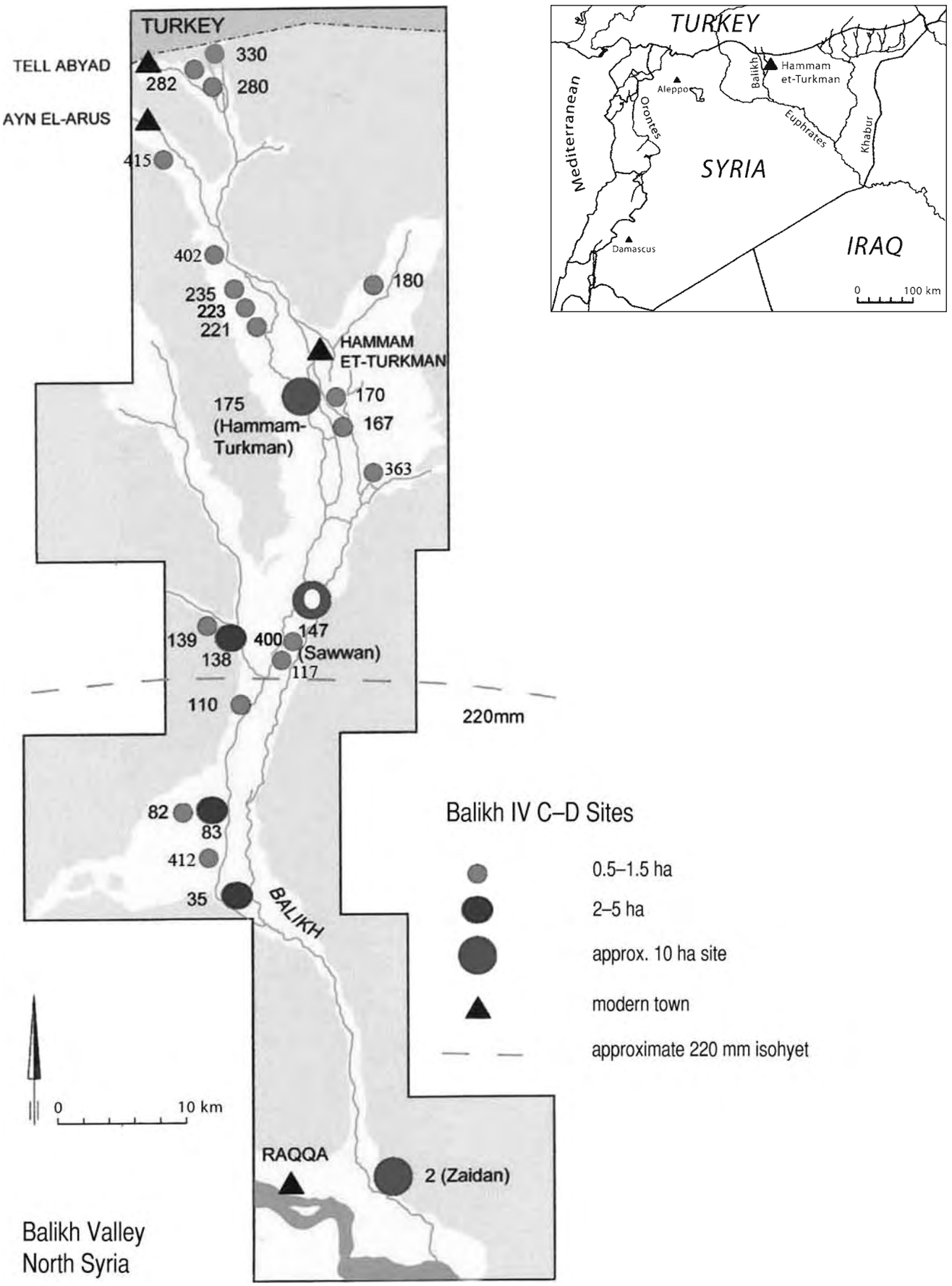


Figure 20.2. Map showing settlement in the Balkih Valley during late Phase IV.
Numbers assigned by Balikh Survey (BS)

oi.uchicago.edu

THE LATE PERIOD IV BALIKH SETTLEMENT PATTERN (fig. 20.2)

In late Period IV, all the sites occupied during Balikh IVB continued to be inhabited. However, the number of sites occupied increased to twenty-four. Of particular note is an increase in the number of small sites, while occupation at the larger sites appears to have continued across both of the phases into which the late Period IV regional sequence was divided. With the notable exception of Tell as-Sawwan (BS147), the larger sites appear to have continued to be occupied over their full extents, and so presumably these sites retained their importance throughout the period.

Out of a total of twenty-four mounds, Phases IVC and IVD diagnostics were derived from twelve and seven mounds, respectively (Phase IVC: BS2, BS35, BS412, BS82, BS110, BS138, BS139, BS117, BS147, BS167, BS175, BS330; Phase IVD: BS2, BS35, BS110, BS138, BS147, BS167, BS175). Apart from site BS83, the remaining eleven sites are hamlets that cannot in general be assigned a date more precise than the late Period IV (BS400, BS363, BS170, BS180, BS221, BS223, BS235, BS402, BS415, BS280, BS282). The restrictions that this state of affairs imposes upon attempts to undertake a fine-grained analysis of the late Period IV settlement pattern are outlined above. However, the impression remains that some changes did take place with respect to the structure of the Balikh Valley settlement at the close of Period IV. This is not so much the result of a decline in the number of hamlets between IVC and IVD, but rather because of the decline of the previously large site of Sawwan.

The surface collections from Sawwan and Tell Zaidan (BS2) consist of hundreds of sherds, and the diagnostics from the latter site, from all the chronological phases under consideration (including Phase VA), were scattered evenly across all sectors of the mound. The situation was different at Sawwan, however, with a decline detectable during Phase IVD, if not IVC. The Sawwan complex consists of three small, merged mounds (Akkermans 1993: 149). The majority of the sherds from all areas was painted and mineral tempered, and in some sectors these were found to the exclusion of the chaff-tempered examples. The absence on the whole of transitional — that is, late Period IV and Period V — forms is worthy of note. Material typical of all phases of Period IV and Period V was recovered only from the northern summit of the tell and its surrounding slopes. This suggests that the occupied area of one of the most important sites in the Balikh had begun to contract before the end of Period IV. This interpretation of the evidence becomes particularly interesting in light of developments in the subsequent Phase VA (see below). Furthermore, there is another curious fact. If the rarity of identifiable Phase IVD sites were to be taken at face value, then the settlement pattern in the middle of the valley during Phase VA would coincide with that indicated for the close of Period IV.

THE PHASE VA BALIKH SETTLEMENT PATTERN (fig. 20.3)

During the last phase, Phase VA, thirteen mounds continued to be inhabited (BS2, BS35, BS83, BS110, BS138, BS147, BS167, BS175, BS235, BS402, BS415, BS280, BS330; fig. 20.3). Tell Zaidan maintained its dominant position close to the Euphrates with a size of about 10 ha. In contrast, in the middle of the valley, while the occupation of Tell Mefesh (BS138) and of Merji Abu Sharib (BS35) appears to have remained stable, the areas under occupation at the two largest sites, Tell as-Samen (BS83) and Tell as-Sawwan, had shrunk to one of the three summits that formed each tell complex. These settlements may have declined to a size of around 2 ha. At the same time, there was a considerable decrease in the number of small hamlets, of which few were recorded.

CONCLUDING REMARKS

The phenomenon of cyclical or sequential occupation may be important for our understanding of these data (Wilkinson and Tucker 1995: 40, 45–46), and it should not be assumed that all the sites assigned to a given phase, or even all areas of a given site, were under occupation at the same time. The last consideration may be particularly pertinent in the present context, because the largest mound formations in the Balikh Valley tend to be composed of separate mounds that appear to have merged over the course of time (Akkermans 1993: 147–60). Low terraces are

oi.uchicago.edu

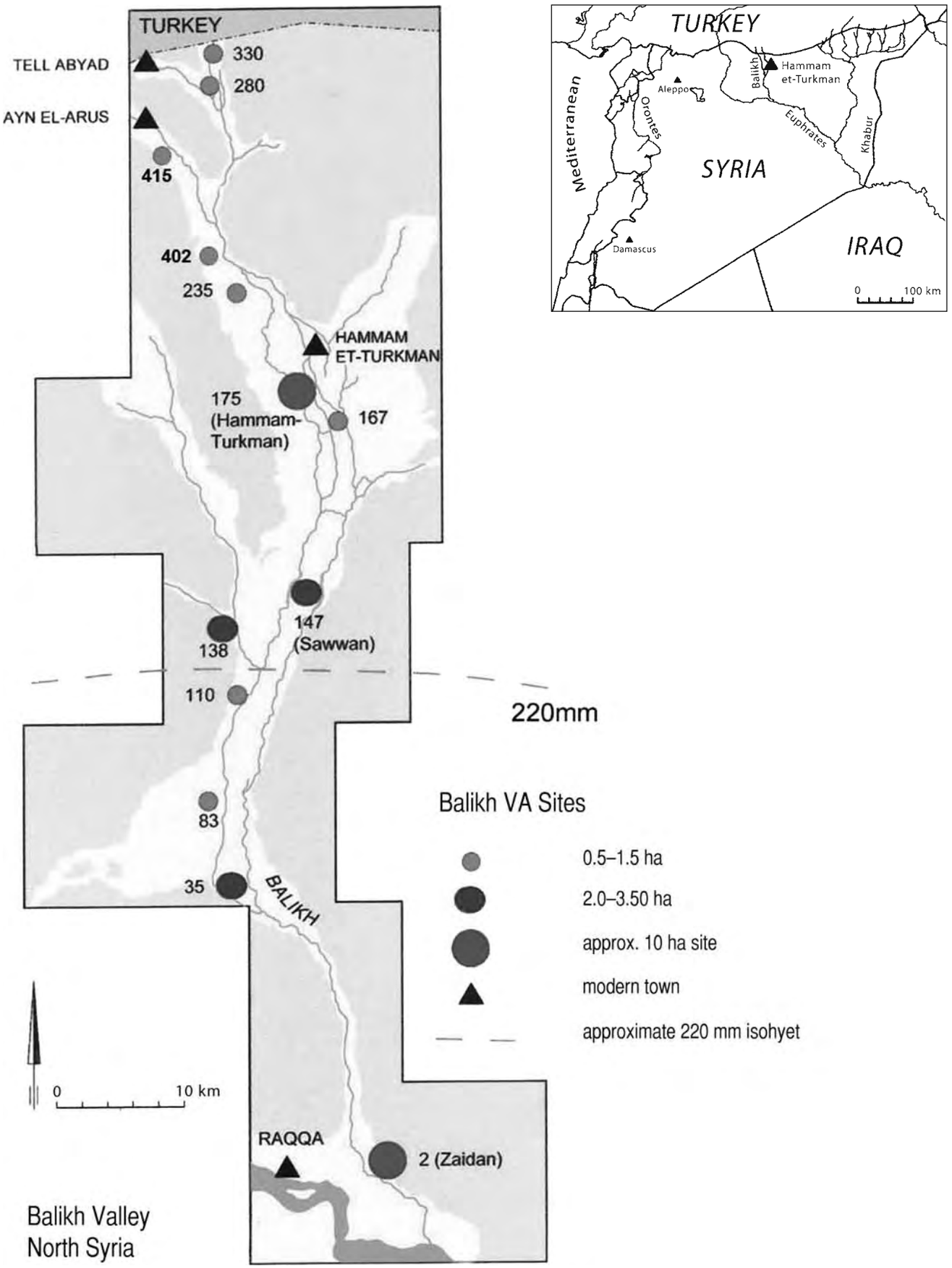


Figure 20.3. Map showing settlement in the Balkih Valley during early Phase V
Numbers assigned by Balikh Survey (BS)

oi.uchicago.edu

another conspicuous feature of these sites, and it has been suggested previously that instances of the latter, in particular those at the foot of Tell as-Sawwan (BS147), may actually have been composed of slope wash (Akkermans 1993: 151), and this is certainly something to bear in mind when calculating the extent of occupations, a notoriously difficult exercise (Curvers 1991: 194). However, the quantities and distribution of the materials available from both Zaidan and Sawwan are such that it may be possible to argue that both complexes may have attained an extent of a little over, and a little below, 10 ha during Phases IVA–IVD and Phases IVA–C, respectively. In the central part of the valley, closer to Sawwan, the occupation at Mefesh may have extended over 3.0–3.5 ha during the whole of Period IV. Farther to the south, Tell as-Samen, (BS83) and Merji Abu Sharib (BS35) may have reached 2–5 ha in size from Phase IVB to Phase IVD.

With a size of approximately 10 ha, Zaidan, Sawwan, and possibly Hammam, in the northern Balikh drainage, may have been the main foci for the agglomeration of population. Whatever their specific function (Wilkinson, Monahan, and Tucker 1996: 19–21, 43–45), they were twice as large as the biggest of the medium-sized Balikh IV mounds, Tell as-Samen (BS83). The remaining two sites, Mefesh (BS138) and Merji Abu Sharib (BS35), were even smaller. Clearly, the sizes of the last three settlements decreased along a continuum. However, the mounds are given a special prominence in this discussion, both because of their location and because they remained consistently the second-largest tier of the settlement pattern. They may even have exercised a certain influence on the location of some of the smallest sites, at least in the central and northern parts of the valley.

In the southern Balikh drainage, Tell Zaidan stood in isolation throughout Period IV. The nearest site is Merji Abu Sharib (BS35), located approximately 25 km upstream, where the river valley broadens and affords better conditions for agriculture. The remaining settlements in the central Balikh drainage are located at fairly regular intervals along the course of the river, and the settlement pattern does not show great changes from the early to the late Period IV, apart from the appearance of two hamlets, BS400, south of Sawwan, and BS412, south of Tell as-Samen. Interestingly, the last of these was discovered buried under the alluvium.

In the northern Balikh drainage, where the best conditions for agriculture occur, the only major site may have been Hammam et-Turkman. Otherwise, this part of the valley seems to have been almost devoid of early settlements, in marked contrast with the situation in the late Period IV. There was then a remarkable increase in the number of hamlets along the tributaries of the Balikh, with a near-continuous string of small sites filling the gap that had existed previously between Hammam and a cluster of sites close to the present-day Syrian-Turkish border — and which it is tempting to say — may have been centered around a large site in the Harran area.

To sum up, from early to late Period IV, the settlement pattern may be said to have been characterized by a high degree of continuity, continuity that appears to have been matched by a remarkable stability, at least as far as the largest sites are concerned. A clear nucleation of the population within comparatively large settlements was attested as early as the beginning of the period, when small hamlets were few. In Phase IVB some of the latter showed a tendency to gravitate toward the bigger agglomerations. The phenomenon continued during late Period IV, although it was then counterbalanced by the proliferation of small sites, especially in the northern part of the valley.

At the end of the long interval of time under consideration, during Phase VA, the structure of the settlement pattern underwent a new transformation. Whatever its causes, environmental, social, or both, it is important to be aware that it was the larger sites that were now affected. In fact, in the central Balikh drainage, two major sites had apparently entered a period of decline. This was manifest through the abandonment of most of the parts of these mounds that had previously been occupied. Settlements as large as Tell as-Sawwan and Tell as-Samen are not likely to contract in size suddenly. As far as the former is concerned, there are indications that the decline may have been gradual and may have started well before the beginning of Period V. Consequently, while such a state of affairs may have been a prelude of things to come, it may also adumbrate another event, which suggests a final remark, even if, admittedly, this is entering the realm of pure speculation.[13]

The point has already been made that Hammam et-Turkman was likely a primary center despite the fact that there is no evidence available to either prove or disprove the proposition. The mound is situated in the southern part of the northern Balikh drainage and during late Period IV was surrounded by a number of "satellites" (fig. 20.2). It is worth asking, therefore, whether there might have been a move of some of the Balikh population from the central

[13] It may be relevant to reiterate that the number of inhabited sites in the middle part of the valley may have started to decline before the end of Period IV.

oi.uchicago.edu

to the northern part of the valley at the transition between Periods IV and V, and whether such a relocation was accompanied not only by the foundation of new hamlets, but also by the growth of another primary center at the expense of Sawwan. On a broader perspective, it may even be tempting to speculate on the loosening of old ideological ties preparatory to the establishment of new forms of social organization.

It has already been suggested that "in the Ubaid period there is evidence attesting to increasing centralization and new forms of symbolic validation of social and economic relations" (Oates 1993: 409). The emergence of individuals in positions of leadership is attested by several aspects of the archaeological record (Oates 1983: 263; Stein 1994), and the growth of primary centers may ultimately be a reflection of ongoing processes affecting the evolution of society. Indeed, throughout Period IV the settlement pattern in the Balikh appears to have been dominated by two paramount sites, which may have been at the head of two small polities in strategic locations. The first was optimally situated to control river traffic, both that coming up the Euphrates and that channeled along the Balikh. The second was surrounded by good agricultural land in the central part of the valley. Only the latter appears to have entered a period of decline at the end of Period IV, and this was followed by near wholesale abandonment. Yet, at the same time, another center north of Sawwan, at Hammam et-Turkman, may have reached the peak of its development and its importance during Period V, especially in Phase VB (Meijer 1988: 75–78; Akkermans 1988b: 287).

At the transition between Periods IV and V in the Balikh Valley, as in other regions, some elements of the material culture, ceramics among them, had entered a new stage of development, one which foreshadowed major changes in the archaeological record (Akkermans 1989: 346). However, the impression is that these were the outcome of an internal, localized evolutionary process that did not imply a break with previous traditions, but may have rather answered new needs in society, which was changing quite dramatically in some regions (Hole 1994). To conclude, it may be that the reorientation of the settlement pattern in the Balikh Valley in early Period V may have resulted from wider events affecting the fabric of society at the transition between the fifth and fourth millennia B.C.

ACKNOWLEDGMENTS

My warmest thanks are due to Professor Peter Akkermans, who entrusted me with the study of the Ubaid and Late Chalcolithic pottery from the Balikh survey, and to Professor Tony Wilkinson, to whom I am indebted for the information about sites BS412, BS117, BS400, BS363, BS402, and BS415. I wish to extend my thanks also to Dr. Olivier Nieuwenhuyse, who is studying the Halaf collection from the Balikh survey. All shortcomings in this contribution are, of course, my own.

BIBLIOGRAPHY

Akkermans, Peter M. M. G.

1988a "The Period IV Pottery." In *Hammam et-Turkman,* Volume 1: *Report on the University of Amsterdam's 1981–84 Excavations in Syria*, edited by M. N. van Loon, pp. 181–285. Leiden: Nederlands Historisch-Archaeologisch Instituut te Istanbul.

1988b "The Period V Pottery." In *Hammam et-Turkman*, Volume 1: *Report on the University of Amsterdam's 1981–84 Excavations in Syria*, edited by M. N. van Loon, pp. 287–349. Leiden: Nederlands Historisch-Archaeologisch Instituut te Istanbul.

1988c "An Updated Chronology for the Northern Ubaid and Late Chalcolithic Periods in Syria: New Evidence from Tell Hammam et-Turkman." *Iraq* 50: 109–46.

1989 "Tradition and Social Change in Northern Mesopotamia during the Later Fifth and Fourth Millennium B.C." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 339–67. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

oi.uchicago.edu

1993 *Villages in the Steppe: Late Neolithic Settlement and Subsistence in the Balikh Valley, Northern Syria*. Archaeological Series 5. Ann Arbor: International Monographs in Prehistory.

Braidwood, Robert J., and Linda S. Braidwood

1960 *Excavations in the Plain of Antioch*, Volume 1: *The Earlier Assemblages: Phases A–J*. Oriental Institute Publications 61. Chicago: University of Chicago Press.

Curvers, Hans H.

1991 Bronze Age Society in the Balikh Drainage (Syria). Ph.D. dissertation, University of Amsterdam.

Diebold, B.

2000 "Preliminary Report on the Ceramic Assemblage at Tell Kurdu." In "Tell Kurdu Excavations 1999," by K. A. Yener, Christopher Edens, Jesse J. Casana, B. Diebold, H. Ekstrom, M. Loyet, and Rana Özbal, pp. 58–65. *Anatolica* 26: 37–117.

Edens, Christopher, and K. Aslıhan Yener

2000 "Excavations at Tell Kurdu, 1996 and 1998." *American Journal of Archaeology* 104: 198–215.

Hammade, Hamido, and Yayoi Yamazaki

2006 *Tell al-'Abr (Syria): Ubaid and Uruk Periods*. Association pour la promotion de l'histoire et de l'archéologie Orientales, mémoires 4. Louvain: Peeters.

Hole, Frank

1994 "Environmental Instabilities and Urban Origins." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 121–51. Monographs in World Archaeology 18. Madison: Prehistoric Press.

Mallowan, M. E. L.

1946 "Excavations in the Baliḫ Valley, 1938." *Iraq* 8: 111–59.

Meijer, D. J. W.

1988 "Tell Hammam: Architecture and Stratigraphy." In *Hammam et-Turkman*, Volume 1: *Report on the University of Amsterdam's 1981–84 Excavations in Syria*, edited by M. N. van Loon, pp. 69–127. Leiden: Nederlands Historisch-Archaeologisch Instituut te Istanbul.

Nishiaki, Yoshihiro; Tatsundo Koizumi; M. Le Mière; and T. Oguchi

2000 "Prehistoric Occupations at Tell Kosak Shamali, the Upper Euphrates, Syria." *Akkadica* 113: 13–68.

Oates, Joan

1983 "Ubaid Mesopotamia Reconsidered." In *The Hilly Flanks and Beyond: Essays in the Prehistory of Southwestern Asia Presented to Robert J. Braidwood, November l5, 1982*, edited by T. C. Young, P. E. L. Smith, and P. Mortensen, pp. 251–81. Studies in Ancient Oriental Civilization 36. Chicago: The Oriental Institute.

1993 "Trade and Power in the Fifth and Fourth Millennia B.C.: New Evidence from Northern Mesopotamia." *World Archaeology* 24: 403–22.

Özgen, E.; H. Tekin; and Barbara Helwing

1997 "Vorläufiger Bericht über die Ausgrabungen auf dem Oylum Höyük." *Istanbuler Mitteilungen* 47: 39–90.

Stein, Gil J.

1994 "Economy, Ritual and Power in 'Ubaid Mesopotamia." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 35–46. Monographs in World Archaeology 18. Madison: Prehistoric Press.

Wilkinson, Tony J.

2003 *Archaeological Landscapes in the Near East*. Tucson: University of Arizona Press.

Wilkinson, Tony J.; Belinda H. Monahan; and D. J. Tucker

1996 "Khanijdal East: A Small Ubaid Site in Northern Iraq." *Iraq* 58: 17–50.

Wilkinson, Tony J., and D. J. Tucker

1995 *Settlement Development in the North Jazira, Iraq: A Study of the Archaeological Landscape*. Iraq Archaeological Reports 3. Warminster: Aris & Phillips.

oi.uchicago.edu

21

NETWORKS OF INTERREGIONAL INTERACTION DURING MESOPOTAMIA'S UBAID PERIOD

A STUDY SPONSORED BY THE CURTISS T. AND MARY G. BRENNAN FOUNDATION

BRADLEY J. PARKER, *University of Utah*

INTRODUCTION

One of the biggest problems facing prehistorians of the ancient Near East is explaining the spread and distribution of patterns of material culture. During several phases of the Early and Middle Chalcolithic period, between about 6000 and 4000 B.C., first the so-called Hassuna-Samarra "culture," then the Halaf, and finally the Ubaid "cultures" spread from different parts of the Mesopotamian heartland to encompass large parts of the ancient Near East. The Ubaid "culture" is particularly interesting not only because it spread from southern Iraq to encompass an area of unprecedented scope, extending from the Persian Gulf to Syria and southeastern Anatolia, but also because it is often hailed as the "developmental bridge" linking the period of the advent of agriculture to the era of state formation (Henrickson and Thuesen 1989b). Although scholars have proposed various hypotheses to account for what might be termed the "Ubaid phenomenon," including theories of migration, colonization and culture contact (Hole 2000: 22; Thuesen 2000: 76), technological transfer (Nissen 1989), and acculturation (Breniquet 1996), the core question that lies at the heart of the issue, namely, what processes account for the dramatic dispersal of Ubaid material culture have yet to be adequately explained.

In this paper I present some preliminary results of fieldwork at the site of Kenan Tepe, where members of the Upper Tigris Archaeological Research Project (UTARP) have recently unearthed well-preserved architectural units dating to the so-called Late Northern Ubaid. By outlining the chronology and cultural characteristics of the Ubaid complex discovered at Kenan Tepe, I highlight both the similarities that link this site to other Ubaid sites in greater Mesopotamia, and the differences that argue for an indigenous cultural development within the Tigris piedmont during this period. In light of these data, I propose a model that might help explain the complicated processes propelling the distribution of Ubaid material culture.

FIELDWORK AT KENAN TEPE

Kenan Tepe is located in the Upper Tigris River Valley about 70 km east of the modern town of Diyarbakir (fig. 21.1). It is a small, multi-period mound measuring between 4.0 and 4.4 ha (Parker et al. 2006). It consists of a tall central mound and a lower town stretching out to the east of the main mound. Over the past six field seasons, members of UTARP have conducted excavations in eight areas of the site. Archaeological research between 2000 and 2005 has shown that Kenan Tepe was occupied during five broad periods: the Late Ubaid period, the Late Chalcolithic period, the beginning of the Early Bronze Age, the Middle Bronze Age, and the Early Iron Age.[1]

[1] For preliminary reports of Ubaid research at Kenan Tepe, see especially Parker and Dodd 2005 and Parker et al. 2006.

oi.uchicago.edu

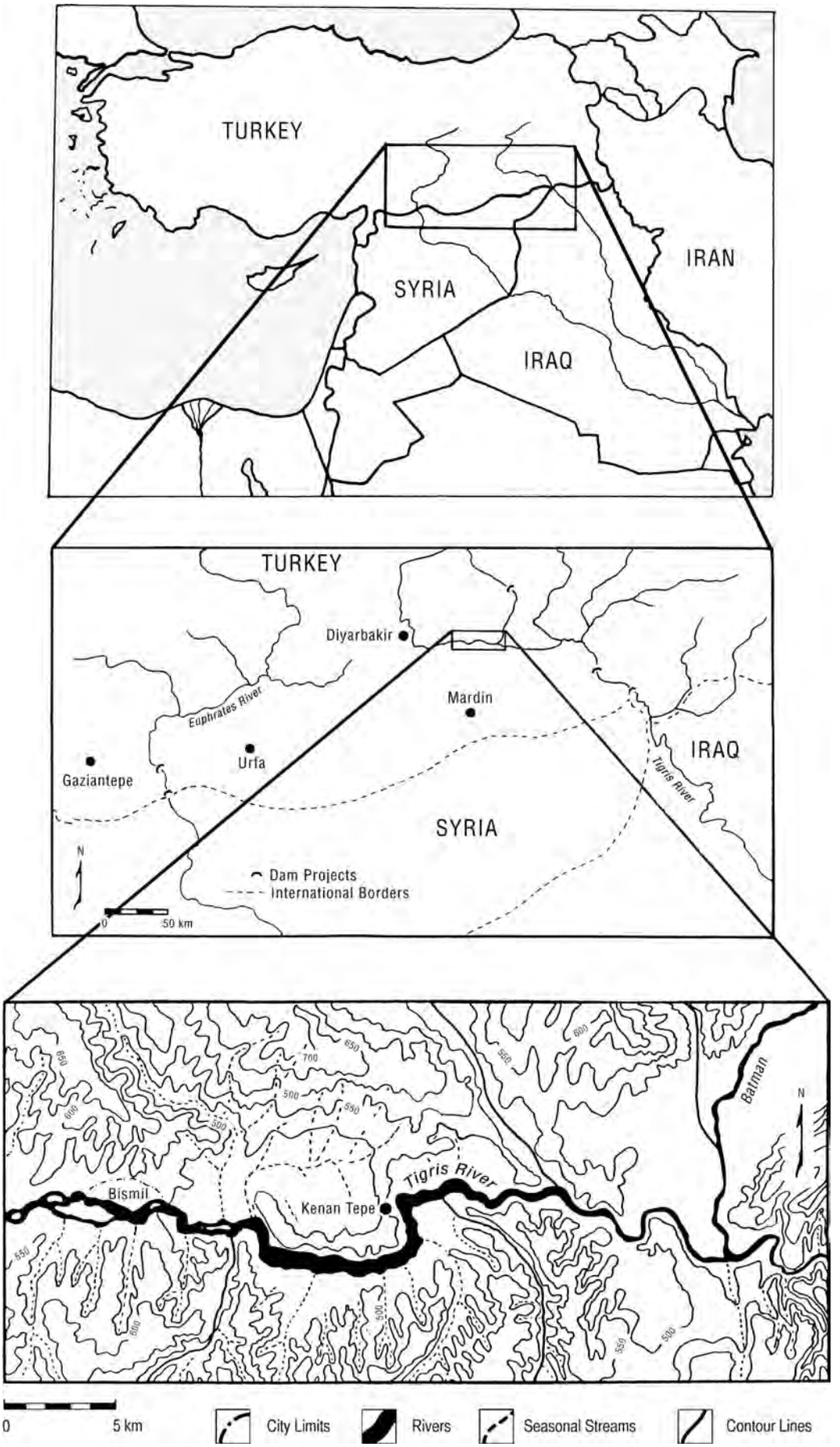


Figure 21.1. Map of the Middle East with enlargements showing the location of Kenan Tepe

oi.uchicago.edu

Data gathered at Kenan Tepe over the last six field seasons allow us to draw interesting conclusions about the nature of both the Ubaid-period settlement at Kenan Tepe and the Late Northern Ubaid cultural complex in general. Excavations have shown that Ubaid-period artifacts and architecture occur in only a few places on the site. These remains are restricted to areas D and E and were found at the bottom of our step trench in area A (fig. 21.2). Excavations during the 2005 field season have shown conclusively that Kenan Tepe's Ubaid-period settlement does not extend under Kenan Tepe's high mound (Parker et al. 2006; Parker and Dodd 2005). Instead, settlement covered a small area of less than 1 ha on the eastern slopes of what was probably a low natural hill. These findings are consistent both with Algaze's original assumptions based on his 1988, 1989, and 1990 surveys of the Tigris Basin (Algaze 1989; Algaze et al. 1991; Algaze, Breuninger, and Knudstad 1994) and with other surveys and excavations slightly farther afield in northern Iraq (e.g., Akkermans 1989; Jasim 1985; Wilkinson and Tucker 1995) and north Syria (e.g., Meijer 1986), where Ubaid-period sites are usually not more than 2–3 ha.

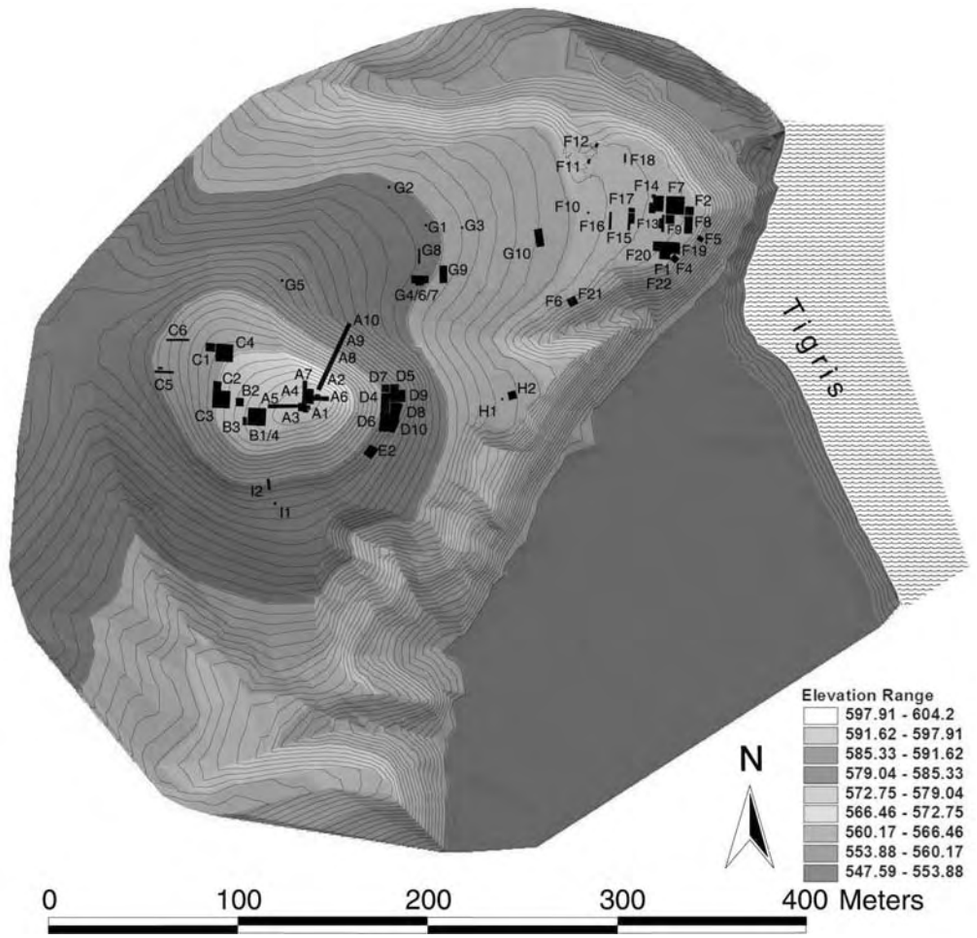


Figure 21.2. Topographic map of Kenan Tepe showing the location of areas and trenches

Recent excavations and radiocarbon dating allow a tentative outline of the Ubaid-period occupation at Kenan Tepe consisting of four phases. The earliest phase (Ubaid phase 1) is represented by the hearths and other cultural debris discovered in the lowest levels of trench D5. Although our exposure is still very small, these data suggest either that during the earliest phase of Ubaid-period occupation at Kenan Tepe architecture was restricted to a very small portion of the site, or that occupation in this initial phase consisted of campsites and/or semi-permanent structures.

Our second phase includes a cell-plan building that we refer to as Ubaid structure 1. This structure, which was contained in the southern portion of trench D5 and the northern portion of trench D8, consisted of a series of small square or rectangular rooms averaging between approximately 1.0 and 1.5 m in width (figs. 21.3–4). Associated with this phase 2 architecture was a well-preserved outside work surface that contained a variety of domestic debris

oi.uchicago.edu

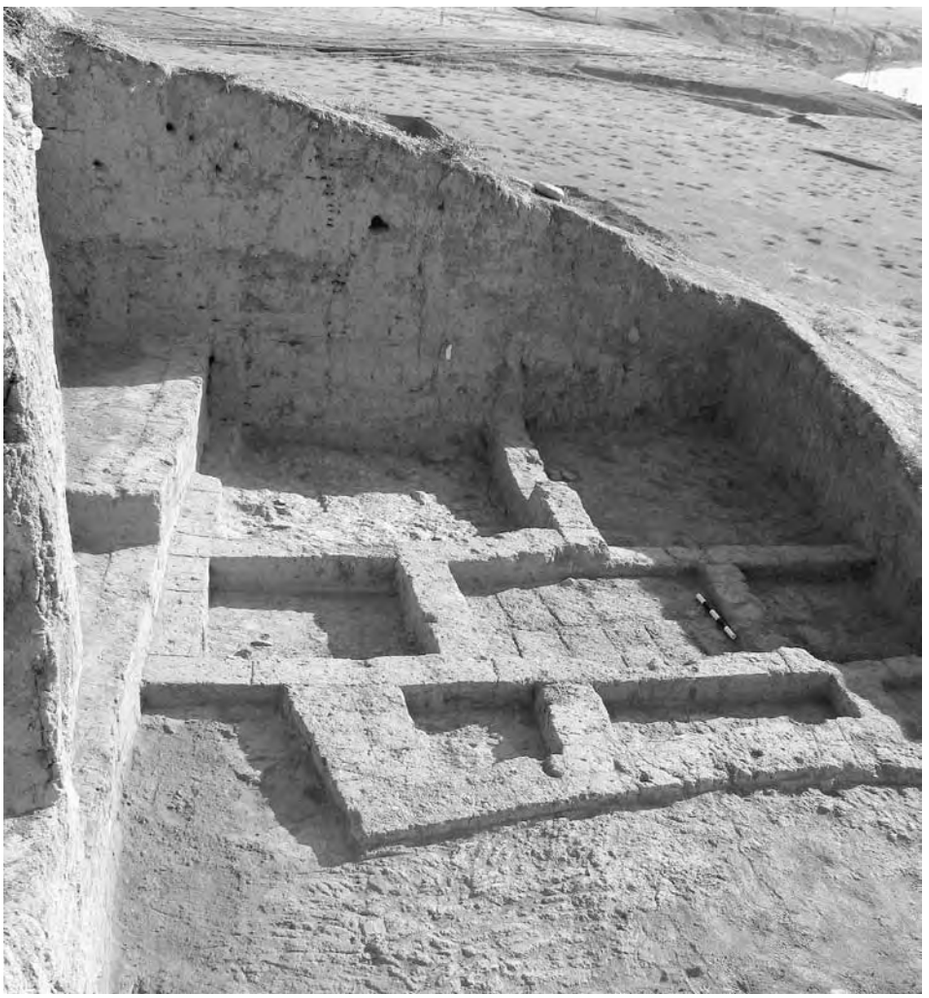


Figure 21.3. Photograph of trench D8 (facing north) showing the southern portion of Ubaid Structure 1 during excavation

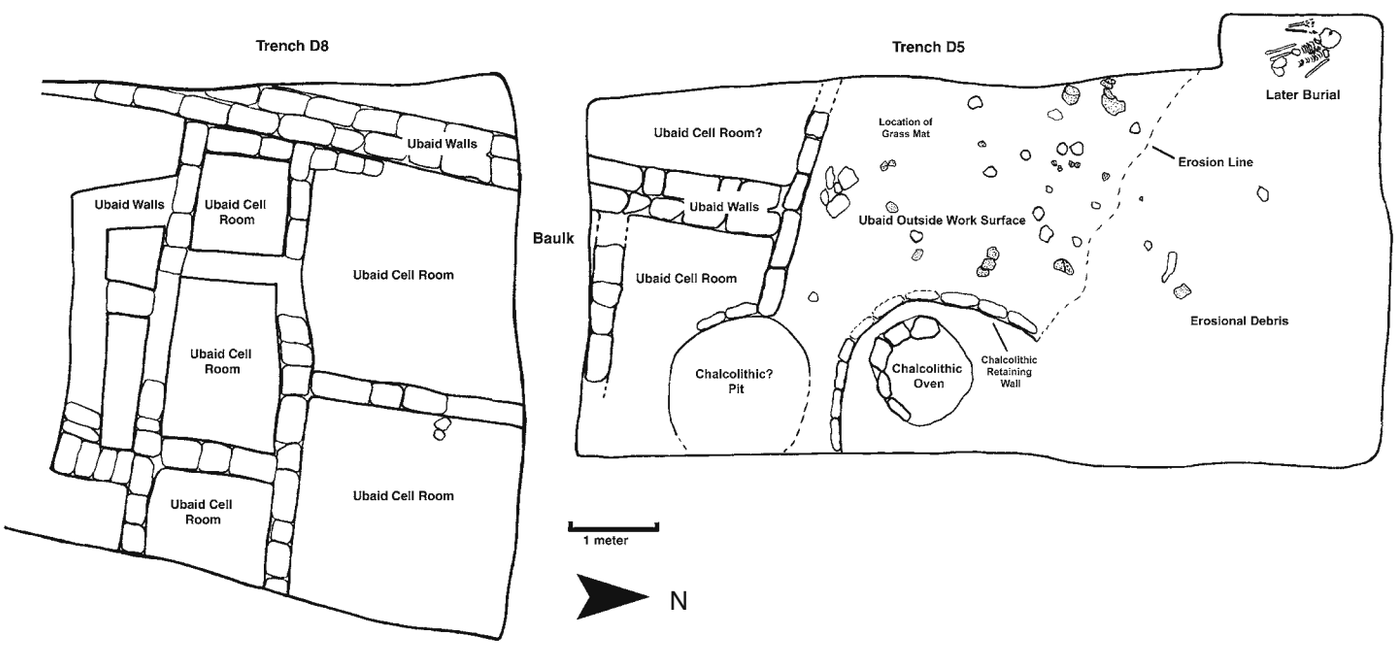


Figure 21.4. Plan of Ubaid Structure 1

oi.uchicago.edu

in situ (Parker and Dodd 2005: 71–73). Most of this surface was covered by thousands of compacted plant pseudomorphs. Examination of the structure and morphology of these pseudomorphs suggests that they are remains of barley or wheat chaff. In part of the trench, this organic mass covered the pseudomorphic remains of a very finely made grass mat (Parker and Dodd 2005: figs. 3–5). The same surface also yielded numerous examples of painted fine and unpainted coarse Ubaid ceramics, obsidian and chert lithics, and a number of other small finds (Parker et al. 2006). Three carbon samples taken from this surface and from a fireplace on this surface, together with a preliminary analysis of the ceramics from these and neighboring contexts, confirmed that these remains belong to the so-called Late Northern Ubaid cultural complex dating to approximately 4650 B.C. (Parker and Dodd 2005: 71–73 and table 1).

Level 3 is represented by a second, considerably larger, cell-plan structure that we refer to as Ubaid structure 2 (figs. 21.5–6). This architecture consisted of two groups of mudbrick walls running roughly north–south and east–west. These walls intersected at roughly right angles, forming a series of small square or rectangular chambers or cells measuring between 1.0 and 1.5 m in width. In the north half of trench D8, these walls formed five such cells. These cell rooms were separated from a similar group of cell rooms in the southern half of the excavation unit by an earthen surface measuring approximately 2.0 m north–south × 3.5 m east–west (fig. 21.6). A variety of ceramics, lithics, and a few animal bones were recovered from this context. A carbon sample taken from this surface yielded a 2-sigma calibrated date of 4700–4460 B.C.

The cells on either side of this surface contained discrete groups of in situ remains including grain pseudomorphs in at least two, ceramics in one, and a burial in another. The grain pseudomorphs were identical to those excavated in association with the earlier phase. The burial presents an interesting problem. Although the skull and many of the disarticulated small bones of the hands and forearms were within the cell room, the long bones of the legs extended into, not under, the mudbricks that made up the neighboring wall. This was obviously a secondary burial since the skeleton was disarticulated and only the skull and some of the arm and the leg bones were included in this inhumation. These factors, plus the very unusual position of the bones, suggest that these remains were purposefully deposited as a secondary inhumation during the construction of Ubaid structure 2.

In the southern portion of trench D8, a second set of intersecting mudbrick walls formed at least two more small cells (figs. 21.5–6). These walls proceeded into the neighboring trench D10. The Ubaid architectural remains in trench D10 were partially destroyed by several large pits. Nevertheless, the Ubaid-period walls clearly demarcated at least one more rectangular cell. Although a large pit cut into this cell, what remained suggests that the interior of the cell had at some point been filled in with mudbricks creating a mudbrick platform, surface, or foundation. Because of the disturbed nature of the contexts in and around the southern portion of Ubaid structure 2, we cannot say with certainty whether these bricks belonged to the original construction of Ubaid structure 2 or if they were a later addition. However, further excavation in trench D8 revealed that some of the cells of the earlier Ubaid structure 1 had been filled in with mudbricks to facilitate the construction of Ubaid structure 2. This being the case, we suspect that these bricks are a later addition. If this hypothesis is correct, a fourth phase of Ubaid remains post-dating Ubaid structure 2 may have been destroyed by erosion and/or later construction on this part of Kenan Tepe's main mound. Ubaid structure 2 was extraordinarily well preserved. Only at its southern end (the portion contained in trench D10) was the architecture disturbed by later pits. All in all, structure 2 measured more than 5 m in width (east–west) × 14 m in length (north–south).

Part of a third Ubaid-period cell-plan structure, which we refer to as Ubaid structure 3, was excavated on the southern slopes of the high mound in trench E2. Although partially disturbed by several later pits, we discovered the northeastern bearing wall of this structure, one complete cell, and portions of at least one more cell (fig. 21.7). The northeastern half of the trench consisted of a large, well-preserved outside work surface that contained numerous ceramics, lithics, and animal bones in situ. A carbon sample taken from this surface yielded a 2-sigma calibrated date of 4720–4520 B.C. Interestingly, we also have a burial in trench E2 that is partially contained within the walls that make up structure 3. In this case, however, these were the remains of an adult female who was buried in a large ceramic vessel (fig. 21.8). Unlike the burial in trench D8, this appears to have been a primary inhumation. The body was well articulated, and the skeleton was complete. Our assumption is that the body was inserted into the vessel (head first) and that the vessel was then placed in the cell during the construction of Ubaid structure 3.

Thus far we have run five carbon dates from Ubaid-period contexts at Kenan Tepe: three from the surface outside Ubaid structure 1 in trench D5 (Parker and Dodd 2005: table 1), one from the surface between the northern and southern portions of Ubaid structure 2 in trench D8, and one from the surface outside Ubaid structure 3 in trench E2 (fig. 21.9). One interesting aspect of the radiocarbon data is how closely together these dates cluster: the full range of the 2-sigma calibrated dates covers a period of only 260 years (between 4720 and 4460 B.C.). Since this is a very

oi.uchicago.edu

Figure 21.5. Photograph of trenches D8 and D10 (facing north) showing Ubaid structure 2 during excavation

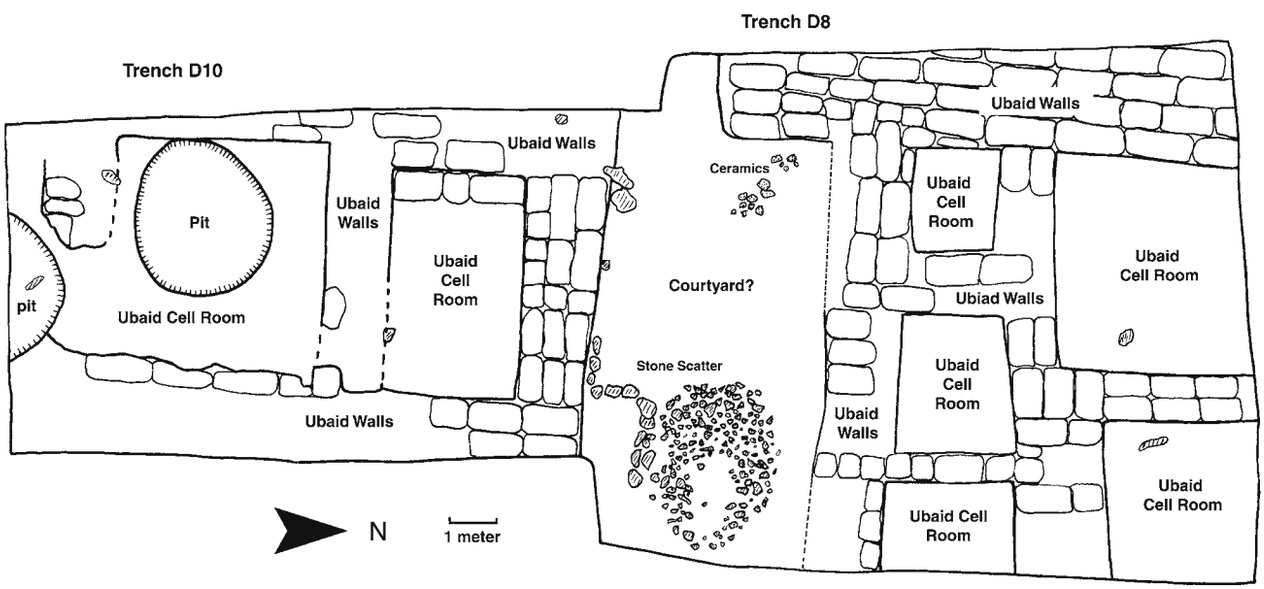


Figure 21.6. Plan of Ubaid structure 2 in trenches D8 and D10

oi.uchicago.edu

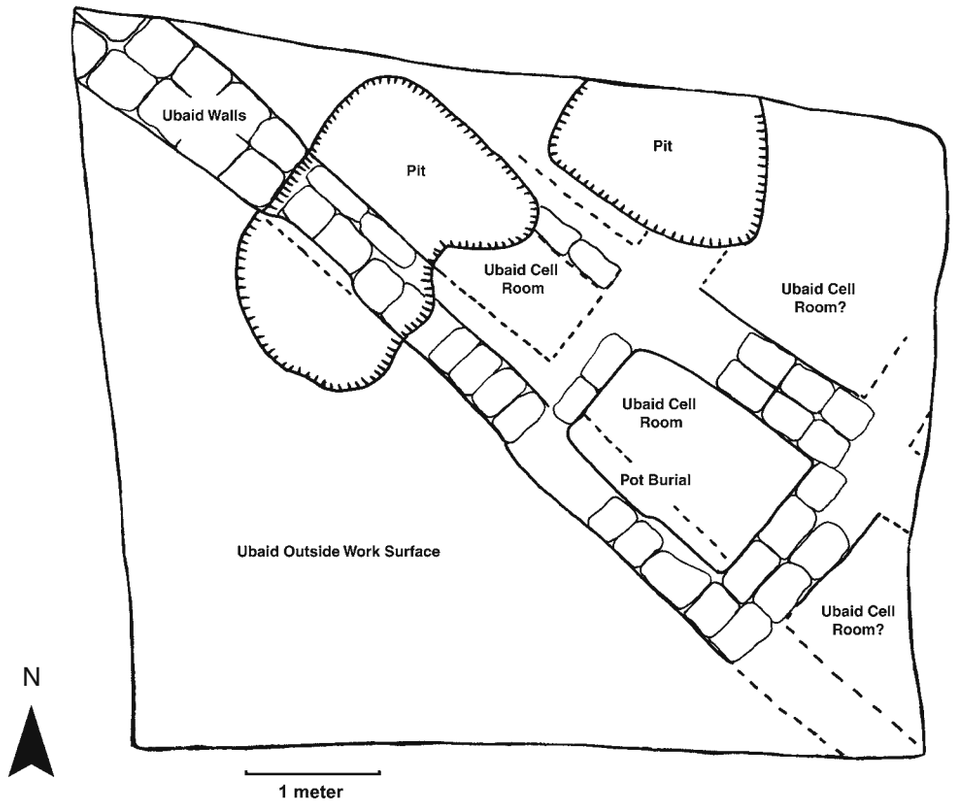


Figure 21.7. Plan of Ubaid structure 3 in trench E2

Figure 21.8. Ubaid-period pot burial in trench E2

oi.uchicago.edu

small corpus of dates and because they fall quite closely together, only a few tentative conclusions can be drawn. First, these dates suggest that the phases of Ubaid-period architecture discernible in the stratigraphy at Kenan Tepe took place over a relatively short period of time. Second, these dates reveal a discrepancy with those suggested by the ceramic analysis: the ceramic parallels support a slightly later date in the Ubaid 4 or terminal Ubaid period (contemporary with Gawra XIII and XII and Hamman et-Turkman IVD [for discussion see Parker et al. 2006: 93–94]).

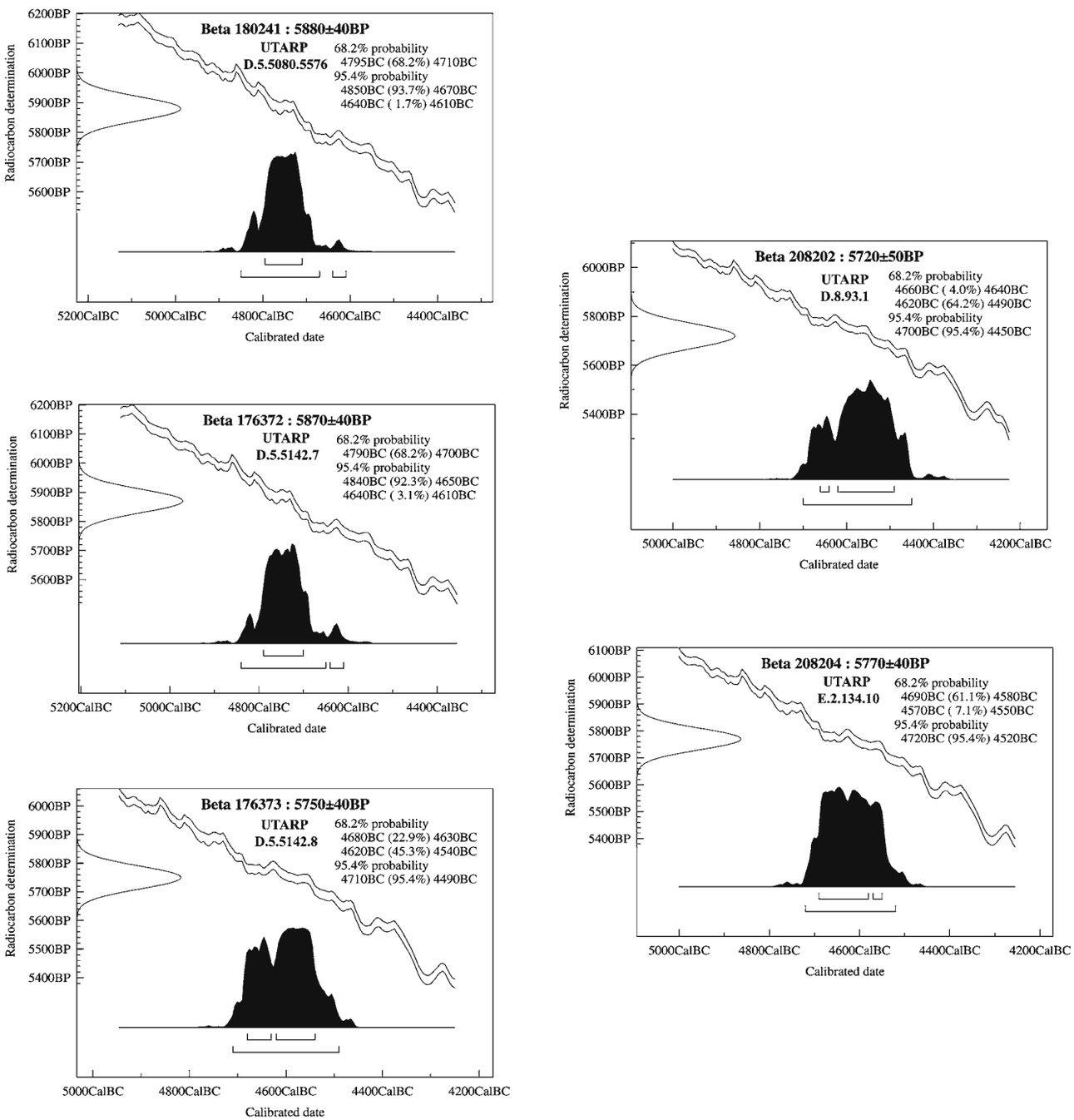


Figure 21.9. Radiocarbon data from Kenan Tepe

oi.uchicago.edu

DISCUSSION OF THE ARCHITECTURE

Although cell-plan architecture is not unprecedented during the Ubaid period, it is not the norm (Roaf 1984; Akkermans 1989). Ironically, the nearest parallel in geographic terms can be found at the Neolithic site of Cayönü, which lies about 75 km to the northwest of Kenan Tepe, though there is far too much depth of time to argue for any direct connection. There are also a number of Ubaid-period parallels. Jasim has reported that similar architecture exists at Tell Adaba level II (Jasim 1989: 83–85). There are, however, significant differences between the Tell Adaba structure and the cell-plan structures unearthed at Kenan Tepe. The Tell Adaba structure consists of four parallel rows of rooms surrounded by courtyards. At Tell Adaba this type of architecture is clearly not the norm, where the well-known tripartite buildings were discovered in abundance. Judging from the architecture and the material remains discovered in and around this structure, and citing ethnographic parallels, Jasim concludes that this is the remains of a storage facility consisting of a number of small compartments that were covered over by reeds and clay when full (Jasim 1989: 84–85). A similar, although much earlier, cell-plan structure was unearthed at 'Oueili. In this case the cells were considerably smaller than those at Tell Adaba or Kenan Tepe (averaging 50–60 cm in diameter). Huot interprets these remains differently than does Jasim. Instead of seeing the rooms as separate storage compartments, he suggests that a surface made of biodegradable material was laid across the cells to create a raised floor for a granary (Huot 1989: 32). Parallels dating to the Ubaid period can also be found in Syria at the sites of Tell Kosak Shamali (Nishiaki 1999) and Tell al-'Abr (Hammade and Yamazaki 1995). In both cases, several scholars have suggested that the cell walls unearthed at these sites were meant to support raised floors used for storing or drying grains (Akkermans and Schwartz 2003: 164–65).

Although the excavated area is too small (approx. 180 sq. m) to draw anything more than tentative conclusions, the available data support three possible interpretations of the cell-plan structures at Kenan Tepe. Firstly, these could be the remains of domestic structures with raised floors. Secondly, these could be the foundations of large storage buildings with raised floors. And thirdly, these could be the remains of a series of small storage compartments that, once filled, were sealed with a layer of reeds or some other material and then covered with clay.

Regarding the first hypothesis, several lines of evidence indicate that the cell-plan units served some sort of domestic function. Numerous artifacts from associated surfaces suggest that a wide variety of domestic activities took place around the cell-plan buildings, including textile production, lithic-blade modification, composite-tool use or repair, fishing-equipment storage or repair, cooking and food preparation, the manufacture or use of personal ornaments, and cereal processing. Archaeological evidence from within the cell rooms is less conclusive. The cells are clearly too small to have been used as living spaces, but in several cases the pseudomorphic remains of grains were discovered. In other cases the cells appear to have been empty, and in two cases the cells contained human remains. These data, combined with the fact that cereal processing was clearly taking place around these structures, suggests that these small cell rooms were used for storage, perhaps representing independent storage units similar to those unearthed at Tell Adaba. It is also possible that these cell rooms served as small basement storage chambers beneath a domestic superstructure, with the walls serving to elevate the wooden living surfaces as well as create storage spaces.

The archaeological data do not support the second hypothesis. If the Kenan Tepe structures were large storage facilities with raised floors meant for storing or drying grains, then the remains found inside each cell room would have fallen from the raised floor of the structure. Thus, one would expect the debris in the cells to be uniform, which is not the case. In addition, the burials are not likely to have been placed in structures whose sole purpose was the storage or processing of agricultural surpluses.

The third hypothesis remains a distinct possibility. As mentioned above, the archaeological data suggest that the cell-plan structures unearthed at Kenan Tepe did serve some sort of storage function. If these structures represent the remains of independent storage facilities similar to those discovered at Tell Adaba, then they must be subsidiary to other, as yet unexcavated, domestic or public buildings. Only further research will confirm or deny this hypothesis.

Given this evidence, I interpret the surface between the two groups of walls and cells in Ubaid structure 2 as a courtyard in the center of what was either a multi-room storage structure or a courtyard house with floors raised above small basement storage rooms. The fact that we have now excavated parts of three structures with nearly identical cell floor plans suggests that during the Ubaid period this type of construction was quite common at the site and perhaps even in the region. This hypothesis is supported by parallels, in both construction and concept, in Syria and the Hatay region of southern Turkey (see above and Yener et al. 2000).

oi.uchicago.edu

Akkermans has argued, contra Roaf (1984), that the tripartite domestic house plan is not the norm in Ubaid-period architecture (Akkermans 1989). Since six seasons of research at Kenan Tepe have yet to reveal tripartite architecture, our data appear to support Akkerman's hypothesis. Nevertheless, I prefer to approach this problem from another direction. Instead of assuming that similarities in ceramic assemblages should be paralleled by similarities in other categories of material remains, such as architecture, burial practices, lithic assemblages, subsistence patterns, and so on, why not see these as separate, independently patterned material-culture traits? If we envision material culture as an expression of social action occurring within overlapping social networks (Mann 1986), then the "cultures" we excavate should not be seen as uniform monolithic entities. If we follow this reasoning, then each community is not part of a monolithic entity but is instead a unique node in a fabric of social relationships. Thus we might not expect domestic architecture, for example, to exhibit similar patterning and/or uniformity to other categories of material culture.

This model does three things. Firstly, it reverses how we view material culture: instead of looking at it from the top down, from the larger "culture" to the single community within it, in this case Kenan Tepe, we see culture from the bottom up, where each site represents the material remains of a unique community that lived within a dynamic social network. Secondly, this model forces us to view each category of material culture separately and on its own terms. Whether or not certain aspects of the monolithic "culture," in this case the Ubaid, were adopted by members of a community is conditioned by an array of factors including how a given community fits into social networks, and what ecological, social, and ideological conditions exist within each community. And thirdly, this model forces us to see interregional interaction not as a single network or "interaction sphere" that links elites from various communities (Schortman 1989; Schortman and Urban 1992), but as a fabric of different overlapping social, economic, political, and ideological networks that link various members of communities to one another in a variety of ways. Using this model we must therefore envision communities as nodes or intersections in a variety of overlapping social networks. The inhabitants of each community may have differential access to indigenous and exogenous ideas, technologies, and commodities via social networks, and they may choose to, or choose not to, adopt, adapt, or emulate any number of materials, technologies, or activities available through them. With this in mind, I now turn to several categories of material culture found in and around the architecture discussed above, to see how these data articulate with the theory just presented.

CERAMICS

Lynn Dodd has recently completed a preliminary analysis of the Ubaid-period ceramics unearthed at Kenan Tepe. Since this report is published elsewhere (Parker et al. 2006), I only summarize some of the relevant points. The first observation concerns the nature of the assemblage. The corpus of ceramics excavated from contexts in and around the structures discussed above do indeed show strong similarities, especially in shape and surface treatment, to Ubaid-period ceramics discovered at various sites spread over a very wide geographic area including southern ('Oueili, Ras al-Amiya), central (Tell Adaba, Tell Madhhur), and northern Iraq (Tepe Gawra), as well as Syria (Hammam et-Turkman, Tell al-'Abr, Tell Ziyadeh, Tell Kosak Shamali) and Turkey (Tell Kurdu, Değirmentepe). Although these similarities clearly place the Middle Chalcolithic remains unearthed at Kenan Tepe within the orbit of the Late Ubaid ceramic tradition, there are also idiosyncrasies that betray some aspects of local agency.

We have identified four fabric types among the Ubaid ceramics from Kenan Tepe: rough ware, coarse ware, medium ware, and fine ware. Ubaid rough ware has large chaff and some calcareous grit temper and breaks in a very angular fashion. Occasional pebble-sized inclusions have been noted. Sherds of this fabric usually have a black core. Ubaid coarse ware has fine grit and medium to large chaff temper. Brown fabric colors predominate. Vessels made of this fabric are often burnished. Ubaid medium ware generally has fine grit and medium to large chaff temper. Some vessels are chaff impressed. Thicker regions may have a black core. The fabric is usually fairly well levigated and compact and exhibits straight, small-grained breaks. Ubaid fine ware normally has fine calcareous grit and fine to medium chaff temper, is low to medium fired, and exhibits straight fine-grained breaks. Normally no black core is evident. This fabric is most frequently used to construct small bowls and cups and occasionally small, fine jars.

Open vessels from the Kenan Tepe corpus fall into four categories, including bell-shaped cups (fig. 21.10D, E, L, M, and N), shallow bowls that sometimes have a scraped exterior (fig. 21.10J and K), open bowls (fig. 21.10C, F, G, H, and I; fig. 21.12A), and basins. Closed vessels fall into two categories: globular jars that are usually con-

oi.uchicago.edu

structed of rough fabrics (fig. 21.11A–H), and jars with tall rims (fig. 21.10A–B; fig. 21.12C–D), which are usually constructed of medium or fine fabrics.

Five categories of surface treatments have also been identified: paint on an untreated fabric, paint on a slip-covered fabric, burnished vessels, incised designs, and bichrome painted designs. The most common method of decoration consists of paint on an untreated fabric. Painted designs are restricted to Ubaid fine and medium wares. The most common colors are purple or dark red, black, and gray (fig. 21.12). Burnishing usually occurs on cooking pots and is relatively common in the Kenan Tepe corpus. Ceramic analysis suggests that differential firing may account for most cases in which paint appears on a cream-colored background, and thus this category of surface treatment is difficult to quantify. In contrast with many other Ubaid-period sites such as Tell Abada (Jasim 1985), Hammam et-Turkman (Akkermans 1988a, 1988b), Tepe Gawra (Tobler 1950; Rothman 2002; Rothman and Blackman 2003), and Tell Madhhur (Roaf 1989), ceramics with bichrome painted and incised decorations are rare in the Kenan Tepe corpus. The relative infrequency of these categories of decoration has led Dodd to conclude that, although Kenan Tepe's potters were probably familiar with techniques of surface texturing, they were not inclined to invest the considerable labor that would be required to achieve some of the more elaborate surface effects known from other sites.

Decorative motifs exhibited on Ubaid ceramics excavated at Kenan Tepe fit well within the range of the Late Ubaid decorative repertoire known from sites such as 'Oueili and Hammam et-Turkman. However, a number of motifs common at these and other sites are conspicuously absent (for discussion, see Parker et al. 2006). The corpus of Ubaid-period ceramics thus far excavated at Kenan Tepe is best paralleled at Hammam et-Turkman, especially in levels IVB and IVC. Most notably, angled-rim jars from Kenan Tepe and from Hammam et-Turkman IVC commonly display broadly executed designs (fig. 21.12A–C and G), while solid black fields of paint are not common except when used to create negative designs (fig. 21.12D–F; Akkermans 1988b: 117, fig. 5:57, 58, fig. 13).

The percentage of painted to unpainted pottery in the Kenan Tepe corpus has not yet been quantified. Nevertheless, our preliminary analysis shows that unpainted ceramics clearly dominate the assemblage. Despite this, it appears that painted ceramics are far more predominant at Kenan Tepe than, for example, at Hammam et-Turkman, where the amount of painted pottery is reported to be very restricted. Another obvious difference between Kenan Tepe and Hammam et-Turkman is suggested by the ceramic parallels. Akkermans has drawn attention to connections between the painted decorative motifs from Hammam et-Turkman and painted traditions at Ubaid sites in central and southern Iraq, while at the same time suggesting that the undecorated ceramics from Hammam et-Turkman are unlike southern Ubaid plain wares (Akkermans 1988b). The opposite appears to be true at Kenan Tepe, where painted motifs find direct parallels in Syria while plain wares are similar to those found in more southerly sites like Madhhur and Ziyadeh (Parker et al. 2006).

oi.uchicago.edu

Figure 21.10. Ubaid Ceramics from Kenan Tepe

A	D5 L5132 KT1 #3: Light gray exterior surface (2.5Y 7/2). Light yellowish brown core (10YR 6/4). Light brownish gray interior surface (2.5Y 6/2). Burnished interior and exterior surfaces. Wash on interior and exterior surfaces. Dark yellowish brown paint on exterior surfaces (10YR 3/4). Very fine chaff and grit temper.
B	D5 L5100 KT48 #1: Light reddish brown exterior surface (5YR 6/4). Yellowish red core (5YR 5/6). Yellowish red interior surface (5YR 5/6). Burnished interior and exterior surfaces. Reddish brown paint (5YR 4/4). Chaff temper.
C	D5 L5108 KT21 #1: Very pale brown exterior surface (10YR 8/3). Gray fabric (10YR 5/1) with an abrupt transition to a reddish yellow core (7.5YR 7/6). Gray interior surface (10YR 6/1). Dark brown paint on rim and exterior surface (7.5YR 3/2). Chaff impressions on interior and exterior surfaces. Medium chaff temper with some grit inclusions.
D	D5 L5029 KT5093 #3: Reddish yellow exterior surface (5YR 6/6). Reddish yellow core (5YR 6/6). Light reddish brown interior surface (5YR 6/4). Very fine grit temper.
E	D5 L5146 KT6 #5: Pink exterior surface (7.5YR 7/4). Pink interior surface (5YR 7/4). Striations visible on interior and exterior surfaces. Fine white grit temper.
F	D5 L5103 KT13 #1: Very pale brown exterior surface (10YR 8/4). Reddish yellow fabric (5YR 7/6) abruptly transitioning to a gray core (10YR 5/1). Dark brown paint on exterior and interior rim (7.5YR 3/3). Small to medium grit, including calcareous grit, and medium chaff temper.
G	E1 L1004 KT1040 #5: Yellow washed exterior surface (10YR 7/6). Yellowish brown fabric (10YR 5/8) abruptly changing to greyish brown (10YR 5/2). Yellow washed interior surface (10YR 5/8). Fine to medium grit and chaff temper.
H	D5 L5100 KT49 #1: Light red exterior surface (2.5YR 6/6). Gray fabric (5YR 5/1) with an abrupt transition to a reddish yellow core (5YR 6/6). Light red interior surface (2.5YR 6/6). Medium chaff temper.
I	E1 L1004 KT1040 #2: Reddish yellow smoothed exterior surface (7.5YR 7/6). Yellowish brown core (10YR 5/4). Reddish yellow interior surface (7.5YR 7/6). Fine grit and chaff temper. Diameter uncertain.
J	D5 L5160 KT3 #6: Light brown exterior surface (7.5YR 6/4). Strong brown fabric (7.5YR 5/6) grading to a dark grayish brown core (10YR 4/2). Brown interior surface (7.5YR 5/3). Fine and medium grit and fine chaff temper.
K	E2 L25 KT7 #8: Pale yellow exterior surface (5Y 8/3). Yellowish brown fabric (10YR 5/4) grading to a dark grayish brown core (10YR 4/2). Pale yellow interior surface (2.5Y 7/4). Very dark grayish brown painted along the top of rim (10YR 3/2). Wash on exterior surface. Very few medium grit and fine chaff temper.
L	D5 L5160 KT3 #3: Yellowish red exterior surface (5YR 5/8). Red fabric (2.5YR 5/8). Yellowish red interior surface (5YR 5/8). Fine grit and few fine chaff temper.
M	D5 L5160 KT3 #10: Yellow exterior surface (2.5YR 7/6). Brown fabric (7.5YR 4/4) grading to a yellowish brown core (10YR 5/4). Very dark grayish crosshatched design painted on exterior surface (10YR 3/2). Very fine grit temper.
N	D5 L5190 KT1 #2: Reddish yellow exterior surface (5YR 6/8). Strong brown fabric (7.5YR 5/8). Reddish yellow interior surface (5YR 6/8). Dark reddish brown painted on exterior surface (5YR 3/2). Fine grit and fine chaff temper.

oi.uchicago.edu

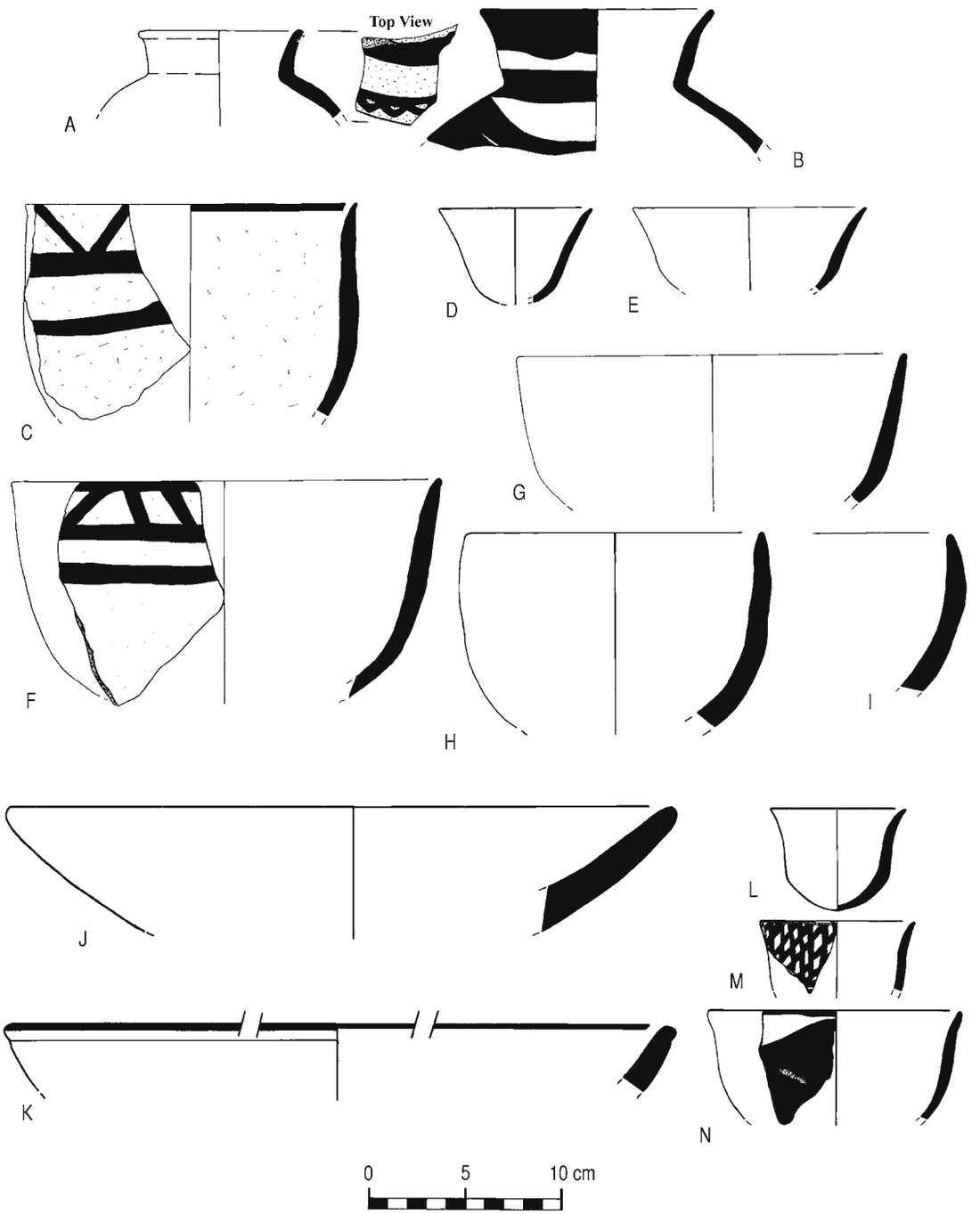


Figure 21.10. Ubaid ceramics from Kenan Tepe

oi.uchicago.edu

Figure 21.11. Ubaid ceramics from Kenan Tepe

A	E2 L18 KT7 #1: Yellowish brown exterior surface (10YR 5/4). Light brown fabric (10YR 6/2) abruptly changing to a black core (5Y 2.5/1). Yellowish brown interior surface (10YR 5/4). Large quartz grit (pebble size) and very large chaff temper.
B	E2 L25 KT7 #7: Brown exterior surface (7.5YR 6/3). Strong brown fabric (7.5YR 5/6) abruptly changing to a dark gray core (5Y 4/1). Pink interior surface (7.5YR 7/4). Three incised lines on the exterior rim. Very fine grit and fine chaff temper.
C	E2 L16 KT15 #1: Light brown exterior surface (7.5YR 6/4). Light brown core (7.5YR 6/4). Light brown interior surface (7.5YR 6/4). Knob on rim. Fine grit and fine chaff temper.
D	E2 L18 KT 7 #2: Reddish yellow exterior surface (7.5YR 7/6). Reddish yellow fabric (7.5YR 7/6) abruptly changing to a dark grayish brown core (10YR 4/2). Burnished on interior and exterior surfaces. Fine grit and fine chaff temper.
E	E2 L18 KT7 #3: Light yellowish brown exterior surface (10YR 6/4). Light brown fabric (7.5YR 6/4) abruptly changing to a bluish black core (2.5/5 PB). Light yellowish brown interior surface (10YR 6/4). Horizontal burnished on interior and exterior surfaces. Small to large grit and chaff temper.
F	E2 L25 KT10 #3: Light reddish brown exterior surface (5YR 6/4). Light brown fabric (7.5YR 6/4) abruptly changing to a gray core (10YR 5/1). Medium grit temper.
G	E2 L24 KT3 #3: Yellowish brown exterior surface (10YR 6/4). Yellowish brown fabric (10YR 5/4) abruptly changing to a bluish black core (5B 2.5/1). Yellowish brown interior surface (10YR 5/4). Fine grit and few very fine chaff temper.
H	E2 L24 KT3 #2: Brown exterior surface (10YR 5/3). Brown fabric (7.5YR 4/2) abruptly changing to a very dark gray core (7.5YR 3/1). Yellowish brown interior surface (10YR 5/4). Horizontal burnish on interior and exterior surfaces. Very large grit and very large to medium chaff temper and chaff faced on exterior surface.

oi.uchicago.edu

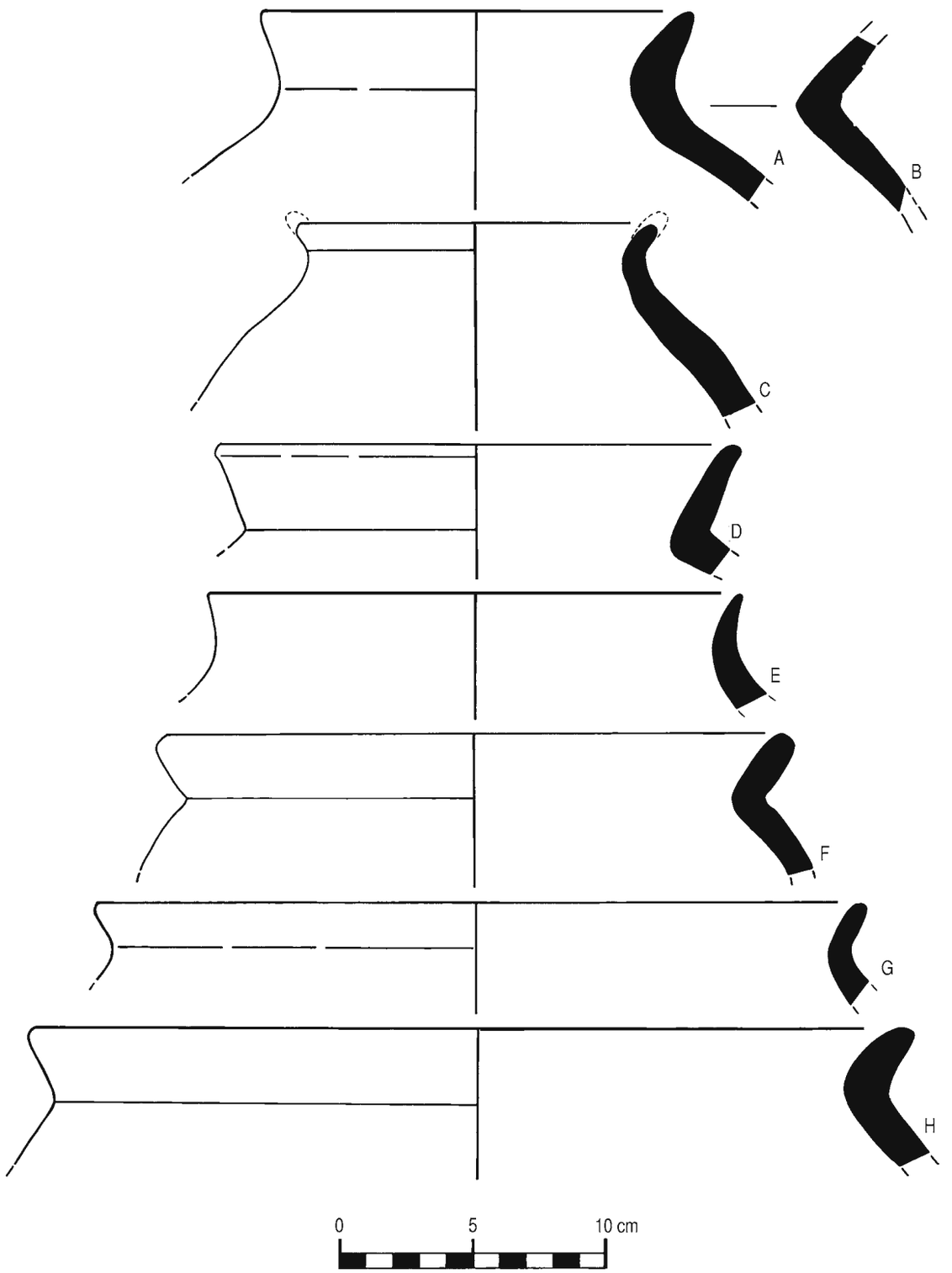


Figure 21.11. Ubaid ceramics from Kenan Tepe

oi.uchicago.edu

Figure 21.12. Ubaid ceramics from Kenan Tepe

A	D5 L5146 KT6 #1: Dark gray surface (10YR 4/1). Reddish yellow fabric (7.5YR 6/6) abruptly transitioning to a black core (7.5YR 2.5/1). Large and fine grit temper.
B	D5 L5029 KT5093 #1: Very pale brown exterior surface (2.5Y 8/3). Reddish yellow core (7.5YR 7/6). Pale yellow interior surface (10YR 8/4). Medium chaff temper. Dark brown paint (10YR 3/3).
C	D8 L70 KT4 #3: Light brown exterior surface (7.5YR 6/4). Strong brown fabric (7.5YR 5/3) grading to a dark gray core (2.5Y 4/1). Brown interior surface (7.5YR 5/3). Fine micaceous grit temper. Dark brown (7.5YR 3/2) paint.
D	D5 L5109 KT1 #1: Dusky red exterior surface (10R 3/2) grading to a very pale brown core (10YR 7/4). Pale yellow interior surface (2.5YR 8/3). Dark brown paint on exterior surface. Cream wash on interior surface. Fine grit temper.
E	D5 L5079 KT5554 #5: Very pale brown exterior surface (10YR 7/4). Very pale brown core (10YR 7/4). Dusky red paint on exterior surface (7.5R 3/2). Fine white grit temper. Diameter uncertain.
F	D5 L5079 KT5554 #3: Very pale brown exterior surface (10YR 7/4). Very pale brown core (10YR 7/4). Very pale brown interior surface (10YR 7/4). Dusky red paint on exterior surface (7.5R 3/2). Fine white grit temper with small air pockets on surfaces. Diameter uncertain.
G	D5 L5132 KT1 #4: Very pale brown exterior surface (10YR 8/4). Very pale brown core (10YR 7/3). Pale yellow interior surface (2.5Y 7/4). Burnished on interior and exterior surfaces. Pale wash on exterior surface. Dark brown paint on exterior surface (7.5YR 3/4). Very fine grit and chaff temper. Diameter uncertain.

oi.uchicago.edu

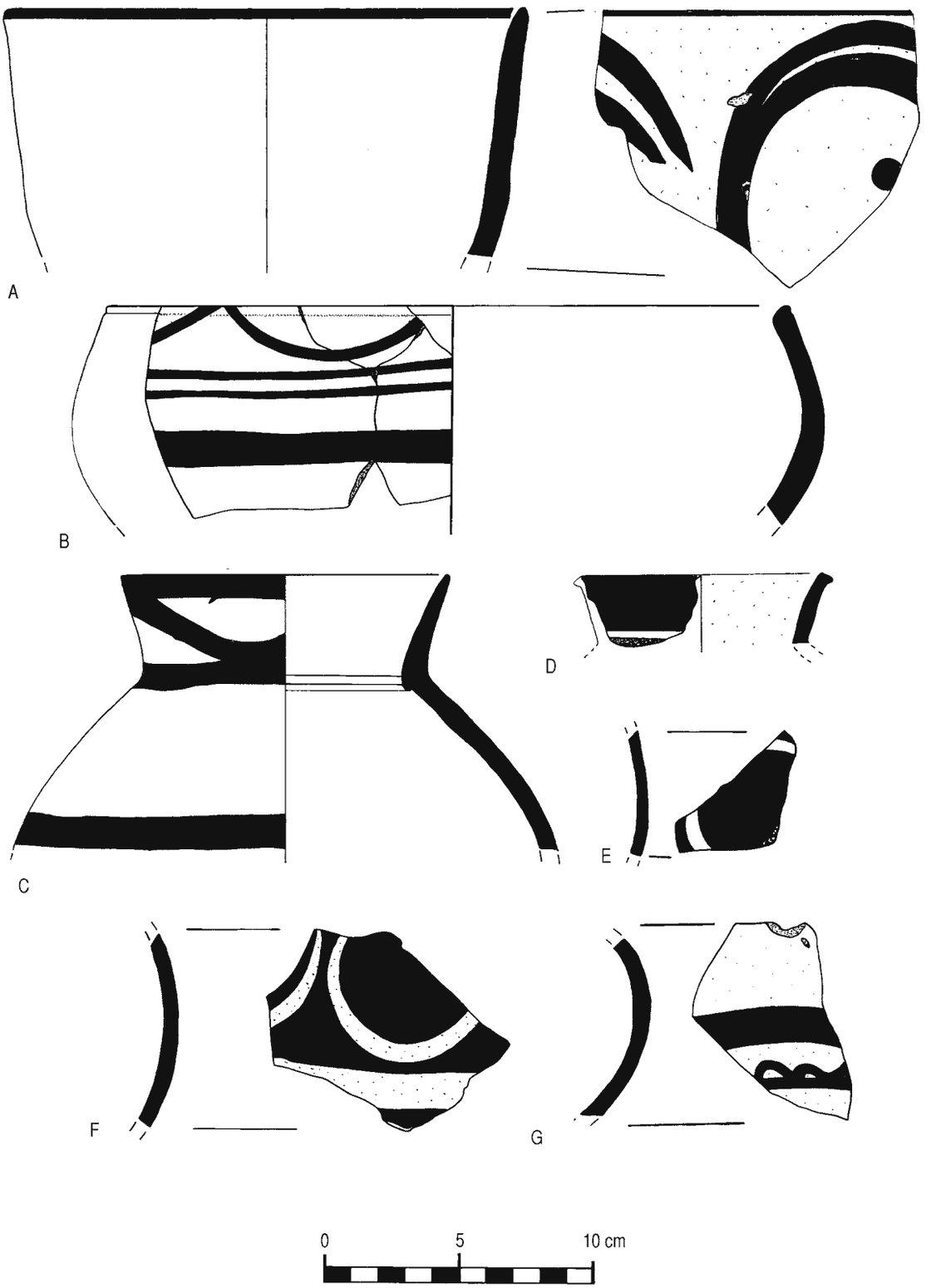


Figure 21.12. Ubaid ceramics from Kenan Tepe

oi.uchicago.edu

LITHICS

Elizabeth Healey has recently completed a preliminary analysis of a sample of the lithic material from Ubaid contexts at Kenan Tepe (Parker et al. 2006; Healey this volume). Her analysis suggests that flint tools derive from locally acquired river cobbles. Obsidian, in contrast, derives from a number of different outcrops in the Bingol and Nemrut Dağ source areas. A large majority of the obsidian remains have traces of cortex, suggesting that obsidian reached the site in a relatively unprepared state. Although a few artifacts, including at least one obsidian arrowhead, show considerable craftsmanship and knowledge of lithic manufacture, the majority of lithic tools exhibit non-systematic working, suggesting that non-specialists were responsible for producing a large portion of the lithic assemblage (Parker et al. 2006: figs. 23–25). It should also be noted that lithic tool makers used every scrap of obsidian available, as most pieces were continually reworked and no whole blade cores have yet been identified. Lithic tools were used for a number of domestic activities. A few pieces have been identified that exhibit silica gloss, suggesting that such blades were used for cutting silica-rich vegetable material, while piercers, scrapers, and blades may be indicative of textile manufacture, hide preparation, and/or food preparation. Finally, there appears to be a difference in the raw materials, proportions, and technology between Ubaid structure 1 and Ubaid structure 3. Whether or not these differences reflect chronological variation or differential access is, at this point, still a matter of speculation.

SMALL FINDS

A number of small finds were recovered from Ubaid contexts at Kenan Tepe. Particularly notable are those recovered in situ from a work surface outside Ubaid structure 1. As mentioned above, this surface yielded several spindle whorls or loom weights, two bone awls, a bone bead, several strainer fragments, and three pierced stones that we interpret as fishnet weights (Parker and Dodd 2005). All these artifacts are indicative of domestic production. Combined with other data from the same context, these artifacts reveal a wide variety of domestic activities including weaving or textile production, grain and fish processing, personal ornamentation, lithic-tool modification, and food preparation. However, in comparison with other Ubaid-period sites in the Hamrin (Jasim 1985) and in southern Iraq, there are a number of artifacts that are conspicuously absent. At the risk of arguing from negative evidence, I would like to at least mention that thus far we have no evidence of bent clay nails, stamp seals, or clay balls.

DISCUSSION OF THE FINDS

In broad terms, Kenan Tepe's Ubaid-period ceramics fit comfortably within the regional Ubaid ceramic tradition. Despite some close similarities, however, many aspects of the ceramic corpus reflect a more local character within the regional style, as detailed above. While the forms, manufacture, and broad categories of style link Kenan Tepe's ceramic corpus to Syria and Iraq, by far the closest ceramic parallels can be drawn between the virtually identical assemblage excavated at the neighboring site of Yenice Yani (Bernbeck, Costello, and Ünal 2004). Although clay-sourcing studies have yet to be carried out, there is evidence that at least some categories of ceramics were produced on site (Parker et al. 2006). These data would support a hypothesis similar to that proposed by Judith Berman (1994) for Ubaid sites in Iran, that locally produced ceramics were made to emulate some, but not all, aspects of a regional style.

There is also the problem of periodization. As mentioned above, ceramic parallels would support a later date in the Ubaid 4 or terminal Ubaid period (contemporary with Gawra XIII and XII and Hamman et-Turkman IVD) than the radiocarbon dates suggest. There are two possible explanations for this discrepancy. First, it is possible that as more data are recovered and our interpretation of the various phases of the Ubaid period is revised, these discrepancies will be minimized or explained. Alternatively, the Kenan Tepe corpus might represent a regional development within the Ubaid tradition that saw particular characteristics arise earlier in this part of the southeastern Turkey than they did elsewhere. More research will obviously be necessary to substantiate this hypothesis. In either case, the data

oi.uchicago.edu

from Kenan Tepe do underscore the need for more in-depth study of the absolute chronology of the Ubaid period both in the southern Ubaid "heartland" and in the north.

The lithic assemblage shows both the exploitation of local flint sources and, not surprisingly, the participation in interregional trade networks. Obsidian from the Lake Van region probably reached the site in a relatively unprepared state. Despite the fact that Kenan Tepe is, in comparison to other Ubaid sites, relatively close to these obsidian source areas, the patterns of obsidian use suggest that this resource was highly valued and that tool production and modification was, for the most part, an element of the local domestic economy.

CONCLUSIONS

I present the following conclusions as tentative hypotheses to be tested through further analysis and fieldwork.[2] In his 1986 book *The Sources of Social Power*, Michael Mann envisions overlapping ideological, economic, military, and political networks as the scaffolding upon which social power is constructed. Networks such as those envisioned by Mann are obviously not something that is visible in the archaeological record. However, the material consequences of social action taking place through such networks, perhaps, are. It is my position that by viewing the categories of archaeological evidence as separate and independently interconnected variables, we might reach stimulating conclusions about the formation of the patterning in the archaeological record we have come to call "culture." Using the Middle Chalcolithic remains from Kenan Tepe as a reference point, let us consider some of the implications of this approach.

Ceramics and obsidian clearly derive from different social networks. Since obsidian sources are relatively limited in the Near East, we can be quite certain that, as raw material, obsidian traveled from source areas in central eastern Anatolia through an intricate, extensive, and already ancient economic network (Renfrew and Dixon 1976). The dissemination of ceramic styles, especially shape and decoration, which may carry encoded cultural messages relating to ideology and identity, certainly traveled over a very different network. As mentioned above, the available evidence suggests that much of the Ubaid ceramic corpus excavated at Kenan Tepe was locally produced (Parker et al. 2006). Thus, although some pots may have moved through local economic networks, they certainly did not travel through the same networks responsible for the distribution of obsidian. Instead, local potters must have adopted, and adapted, regional styles and manufacturing techniques through ideological networks that probably originated in Iraq and Syria. Although the social meanings encoded in Ubaid ceramic styles remain elusive, stylistic forms of non-verbal communication were surely instrumental in the spread of ceramic styles. The hypothesis that the ceramic styles documented at Kenan Tepe are most closely paralleled in north Syria (Parker et al. 2006) suggests that ideological dissemination worked in a "down-the-line" fashion, as described by Renfrew (1975).

If the cell-plan architecture excavated at Kenan Tepe is the norm at the site or in the region, then we can be relatively certain that architectural forms that have come to be associated with the Ubaid (tripartite buildings) did not predominate at all or even most sites (if we follow Akkermans) that exhibit Ubaid ceramics. Instead, the type of architecture utilized is probably conditioned by local ecological conditions, and perhaps by local tradition.

The data from Kenan Tepe support the hypothesis that the inhabitants of Kenan Tepe participated in overlapping social networks through which various products, materials, and technologies were transferred. Borrowing explicitly from Michael Mann, I propose that individuals, households, and communities should be viewed as unique nexuses in networks of regional and interregional interaction. Furthermore, instead of envisioning the spread of material culture as the result of migration, colonization, or acculturation, I propose that the patterns of material culture observable in the archaeological record are the product of social action and local agency that takes place within the fabric of interregional economic, political, and ideological relationships.

---

[2] Preliminary studies of both the faunal and botanical remains have started but remain incomplete.

oi.uchicago.edu

ACKNOWLEDGMENTS

This chapter relies on the work of numerous people, especially the staff and crew of the Upper Tigris Archaeological Research Project. I would like to thank all those who have participated in the project over the years. Without their hard work and dedication, this study would not have been possible. The subsection on Ubaid ceramics relies heavily on the work of Lynn Dodd, while the subsection on the lithics relies heavily on the work of Elizabeth Healey. I am particularly indebted to these two scholars for their input. Although much of the work directly related to this chapter was conducted with the generous support of the Curtiss T. and Mary G. Brennan Foundation, excavations at Kenan Tepe have also benefited from the financial support of a number of other granting agencies and institutions, including the National Endowment for the Humanities, the National Geographic Society, the American Philosophical Society, the University of Utah, and the University of Southern California. I owe my sincere gratitude to all these agencies and institutions. Finally, this paper benefited greatly from conversations, suggestions, and comments from Catherine Foster and Jenni Henecke.

BIBLIOGRAPHY

Akkermans, Peter M. M. G.

1988a "The Period IV Pottery." In *Hammam et-Turkman*, Volume 1: *Report on the University of Amsterdam's 1981–84 Excavations in Syria*, edited by M. N. van Loon, pp. 181–285. Leiden: Nederlands Historisch-Archeologisch Instituut te Istanbul.

1988b "An Updated Chronology for the Northern Ubaid and Late Chalcolithic Periods in Syria: New Evidence from Tell Hammam et-Turkman." *Iraq* 50: 109–46.

1989 "Tradition and Social Change in Northern Mesopotamia during the Later Fifth and Fourth Millennium B.C." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 339–67. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Akkermans, Peter M. M. G., and Glenn M. Schwartz

2003 *The Archaeology of Syria: From Complex Hunter-gatherers to Early Urban Societies (ca. 16,000–300 B.C.)*. Cambridge: Cambridge University Press.

Algaze, Guillermo

1989 "A New Frontier: First Results of the Tigris-Euphrates Archaeological Reconnaissance Project, 1988." *Journal of Near Eastern Studies* 48: 241–81.

Algaze, Guillermo; R. Breuninger; and J. Knudstad

1994 "The Tigris-Euphrates Archaeological Reconnaissance Project: Final Report of the Birecik and Carchemish Dam Survey Areas." *Anatolica* 20: 1–96.

Algaze, Guillermo; R. Breuninger; C. Lightfoot; and M. Rosenberg

1991 "The Tigris-Euphrates Archaeological Reconnaissance Project: A Preliminary Report of the 1989–1990 Seasons." *Anatolica* 17: 175–240.

Berbeck, R.; S. Costello; and N. Ünal

2004 "Excavations at Yenice Yanı 2002." *Kazı Sonuçları Toplantısı*, Volume 25, Part 1, pp. 117–26.

Berman, Judith C.

1994 "The Ceramic Evidence for Sociopolitical Organization in 'Ubaid Southwestern Iran." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 23–33. Monographs in World Archaeology 18. Madison: Prehistory Press.

oi.uchicago.edu

Breniquet, Catherine

1996 *La disparition de la culture de Halaf: Les origines de la culture d'Obeid dans le nord de la Mésopotamie*. Bibliothèque de la Délégation archéologique française en Iraq 9. Paris: Éditions recherches sur les civilisations.

Hammade, Hamido, and Yayoi Yamazaki

1995 "A Preliminary Report on the Excavation at Tell al-'Abr on the Upper Euphrates, 1992." *Akkadica* 93: 4–10.

Henrickson, Elizabeth F., and Ingolf Thuesen, editors

1989a *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988). Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

1989b "Introduction: The Importance of the 'Ubaid: Transition between Revolutions." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 11–15. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Hole, Frank

2000 "The Prehistory of the Khabur." In *La Djéziré et l'Euphrate Syriens de la protohistoire à la fin du II^e millénaire av. J.-C.: Tendances dans l'interprétation historique des données nouvelles*, edited by O. Rouault and M. Wäfler, pp. 17–27. Subartu 7. Turnhout: Brepols.

Huot, Jean-Louis

1989 "'Ubaidian Villages of Lower Mesopotamia." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 19–42. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Jasim, Sabah A.

1985 *The 'Ubaid Period in Iraq: Recent Excavations in the Hamrin Region*. British Archaeological Reports, International Series 267. Oxford: British Archaeological Reports.

1989 "Structure and Function in an 'Ubaid Village." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 79–90. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Mann, Michael

1986 *The Sources of Social Power*, Volume 1: *A History of Power from the Beginning to A.D. 1760*. Cambridge: Cambridge University Press.

Meijer, Diederik

1986 *A Survey in Northeastern Syria*. Istanbul: Nederlands Historisch-Archaeologisch Instituut te Istanbul.

Nishiaki, Yoshihiro

1999 "Tell Kosak Shamali: Preliminary Report of the Excavations (1994–1997)." In *The Archaeology of the Upper Syrian Euphrates: The Tisrin Dam Area* (Proceedings of the International Symposium Held at Barcelona, January 28–30, 1999), pp. 71–82. Barcelona: Editorial Ausa.

Nissen, Hans J.

1989 "The Ubaid Period in the Context of the Early History of the Ancient Near East." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 245–55. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Parker, Bradley J., and Lynn Dodd

2005 "The Upper Tigris Archaeological Research Project (UTARP): A Preliminary Report from the 2002 Field Season." *Anatolica* 30: 69–110.

oi.uchicago.edu

Parker, Bradley J.; Lynn Dodd; Andrew Creekmore; Elizabeth Healey; and Catherine Painter
2006 "The Upper Tigris Archaeological Research Project (UTARP) — A Preliminary Report from the 2003 and 2004 Field Seasons." *Anatolica* 32: 71–151.

Roaf, Michael
1984 "Ubaid Houses and Temples." *Sumer* 43: 80–90.
1989 "'Ubaid Social Organization and Social Activities as Seen from Tell Madhhur." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 91–146. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Renfrew, Colin
1975 "Trade as Action at a Distance: Questions of Integration and Communication." In *Ancient Civilization and Trade*, edited by J. A. Sabloff and C. C. Lamberg-Karlovsky, pp. 1–60. School of American Research Advanced Seminar Series. Albuquerque: University of New Mexico.

Renfrew, Colin, and J. Dixon
1976 "Obsidian in Western Asia: A Review." In *Problems in Economic and Social Archaeology*, edited by G. d. G. Sieveking, J. H. Longworth, and K. E. Wilson, pp. 137–50. London: Duckworth.

Rothman, Mitchell S.
2002 *Tepe Gawra: The Evolution of a Small, Prehistoric Center in Northern Iraq*. University Museum Monographs 112. Philadelphia: University of Pennsylvania, Museum of Archaeology and Anthropology.

Rothman, Mitchell S., and M. J. Blackman
2003 "Late Fifth and Early Fourth Millennium Exchange Systems in Northern Mesopotamia: Chemical Characterization of Sprig and Impressed Wares." *Al-Rāfidān* 24: 1–24.

Schortman, E. M.
1989 "Interregional Interaction in Prehistory: The Need for a New Perspective." *American Antiquity* 54: 52–65.

Schortman, E. M., and P. Urban, editors
1992 *Resources, Power and Interregional Interaction*. New York: Plenum.

Tobler, Arthur J.
1950 *Excavations at Tepe Gawra*, Volume 2: *Levels IX–XX*. Publications of the Baghdad School, Excavations 1. Philadelphia: University of Pennsylvania Press.

Thuesen, Ingolf
2000 "Ubaid Expansion in the Khabur: New Evidence from Tell Mashnaqa." In *La Djéziré et l'Euphrate Syriens de la protohistoire à la fin du II^e millénaire av. J.-C.: Tendances dans l'interprétation historique des données nouvelles*, edited by O. Rouault and M. Wäfler, pp. 71–79. Subartu 7. Turnhout: Brepols.

Wilkinson, Tony J., and D. J. Tucker
1995 *Settlement Development in the North Jazira, Iraq: A Study of the Archaeological Landscape*. Iraq Archaeological Reports 3. Warminster: Aris & Phillips.

Yener, K. Aslıhan; Christopher Edens; Timothy P. Harrison; J. Verstraete; and Tony J. Wilkinson
2000 "The Amuq Valley Regional Projects, 1995–1998." *American Journal of Archaeology* 104: 163–220.

oi.uchicago.edu

22

EXPLORING SOCIAL ORGANIZATIONAL ASPECTS OF THE UBAID COMMUNITIES: A CASE STUDY OF DEĞIRMENTEPE IN EASTERN TURKEY

BEKIR GURDIL, *Cotsen Institute of Archaeology, University of California, Los Angeles*

INTRODUCTION

This paper concerns the Ubaid-period built environment of Değirmentepe in the mountainous region of eastern Turkey (fig. 22.1). The site is located near the west bank of the Euphrates in the high plateau of the Malatya province at an elevation of 650 m above sea level (fig. 22.2). It is a low, multi-period mound covering an area of 1 ha or slightly more, occupied during the fifth millennium B.C.

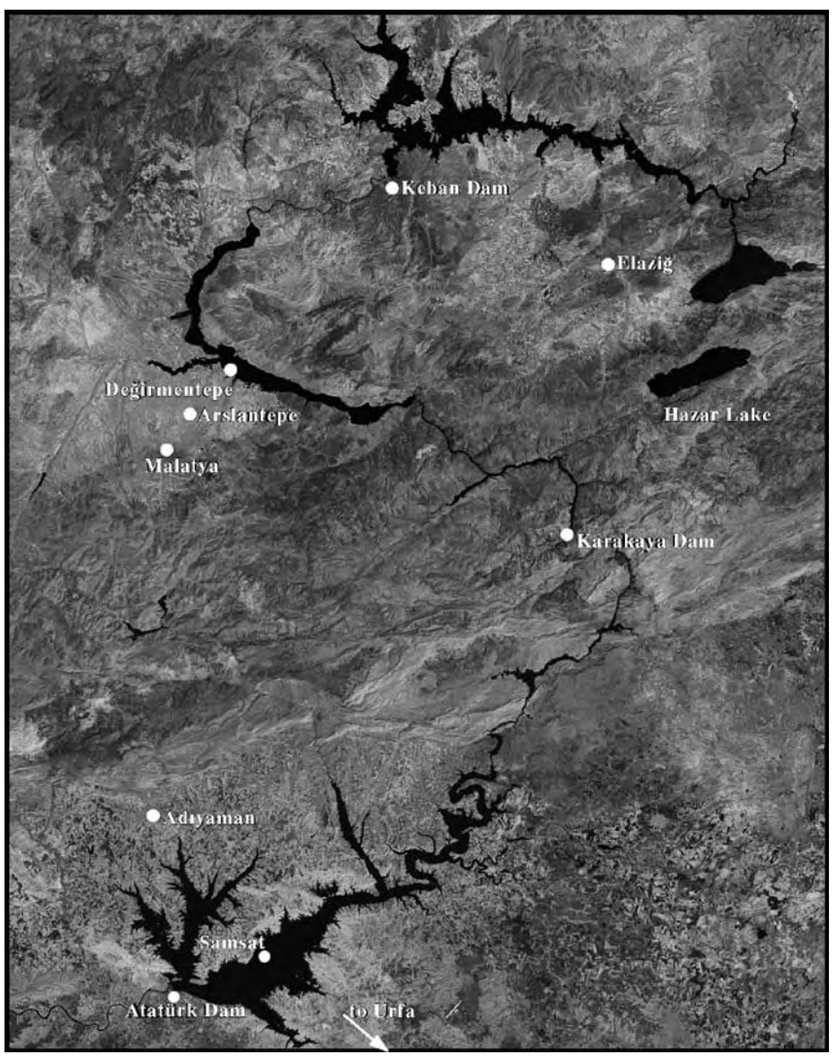


Figure 22.1. Elazıg and Malatya plains in Eastern Anatolia (image: Landsat-7, ca. 2000, NASA)

oi.uchicago.edu

Figure 22.2. Aerial view of Değirmentepe. To the north, about 50 m away from the site, the meandering Euphrates River flows east (courtesy of Değirmentepe Archive, Istanbul University)

The salvage project at Değirmentepe was carried out by Istanbul University between 1980 and 1987, after which the site was submerged under the Karakaya Reservoir. The excavator of the site, Ufuk Esin, dated the lowermost layers of the mound to the Late Ubaid period based on artifacts and architectural remains (Esin 1985, 1986b, 1994; Esin and Harmankaya 1987, 1988). The material-culture remains that were recovered from those layers were reminiscent of the artifact assemblages documented from the well-known Ubaid sites of both north and south Mesopotamia. In addition to the artifact types characteristic of the Ubaid, such as Ubaid painted pottery, labrets, and a significant number of stone seals and seal impressions, the excavations produced well-preserved architectural remains revealing a dense, village-sized community. Since the last excavation season in 1987, the site has retained its importance as the only excavated Ubaid settlement in the mountainous region of eastern Anatolia, although ongoing excavations at the nearby site Arslantepe may soon reach thick Ubaid layers (M. Frangipane, pers. comm.). In 2005, the analysis of the architectural remains from the Ubaid layers of Dergirmentepe was completed as dissertation research (Gurdil 2005).[1]

The Ubaid occupations at Değirmentepe were dated with radiocarbon and thermoluminescence (TL) methods. Of the thirty-three radiocarbon samples collected from different periods, ranging from the Iron Age to the Ubaid layers, only ten samples were dated, two of which provided Ubaid dates: ODTU-Değirmentepe 20 from room I with a calibrated date range of 5420 B.C., and ODTU-Değirmentepe 22 with a calibrated date range of 5385–4570 B.C. (Özbakan 1985). A date of 4492 B.C. was obtained through the TL method applied to a sample recovered from the floor of a hearth found in room BM. Esin argued that there are inconsistencies in these dates because the radiocarbon samples seemed to provide dates that were too early for the Ubaid while the TL sample gave a more reliable date (Esin 1986a). Esin dated these lowermost occupations of the site to the Late Ubaid period based mainly on the pottery and the recovery of tripartite-plan architecture (Esin 1983).

The stratigraphy for these occupations was established only through the detailed study of the architectural remains, which are termed Phases A to D, from latest to earliest. The excavator of the site had already established a more detailed stratigraphical order by the end of the project, but layers in different parts of the site received different numbers, and they were not linked (Esin and Harmankaya 1987, 1988). For that reason, phases A to D represent an attempt to establish a site-wide scheme for these separately recorded Ubaid layers (for comparison of this phasing with Esin's stratigraphy, see Esin and Harmankaya 1988; Gurdil 2005: 176–82 and fig. 3.17). The difficulty of establishing a timeline for these extensive horizontal exposures with only a limited step trench and one test sounding is worth noting. While a comparative study involving both the architecture and pottery would have helped to assess the reliability of these architectural phases, and also that of the posited temporal changes in spatial organization, this

[1] I am grateful to Ufuk Esin for giving me permission to study the architectural evidence recovered from the Ubaid layers of Değirmentepe and for allowing me access to the inventoried finds kept in the Malatya Museum as well as the Değirmentepe archive kept at the Prehistory Department in Istanbul University, from which I was able to produce all my architectural drawings.

oi.uchicago.edu

was not possible because ceramic studies remain incomplete. With these circumstances in mind, only the major occupation phase of the village, phase B, is discussed here. Firstly, I introduce the architectural remains, and secondly, I summarize the functional analysis carried out using the material remains.[2] After that, I elaborate on the nature of the spatial organization and the types of activities that took place inside the architecturally defined spaces. These discussions enable me to propose brief explanations for the social organization of the phase B village community that lived beyond the northern peripheries of Mesopotamia.

ARCHITECTURE OF THE PHASE B OCCUPATION

The remains of the earliest two phases D and C of Ubaid Değirmentepe were limited to a few walls and rooms exposed at the northeast sounding, where further explorations were not possible due to lack of time. There, the evidence suggested that these early settlements were probably confined to the east portion of the mound covering the area of about 0.4 ha with an oblong settlement layout. Above them was the major occupation phase B spreading toward the west and reaching the size of an average village (fig. 22.3). It was from this occupation that the walls

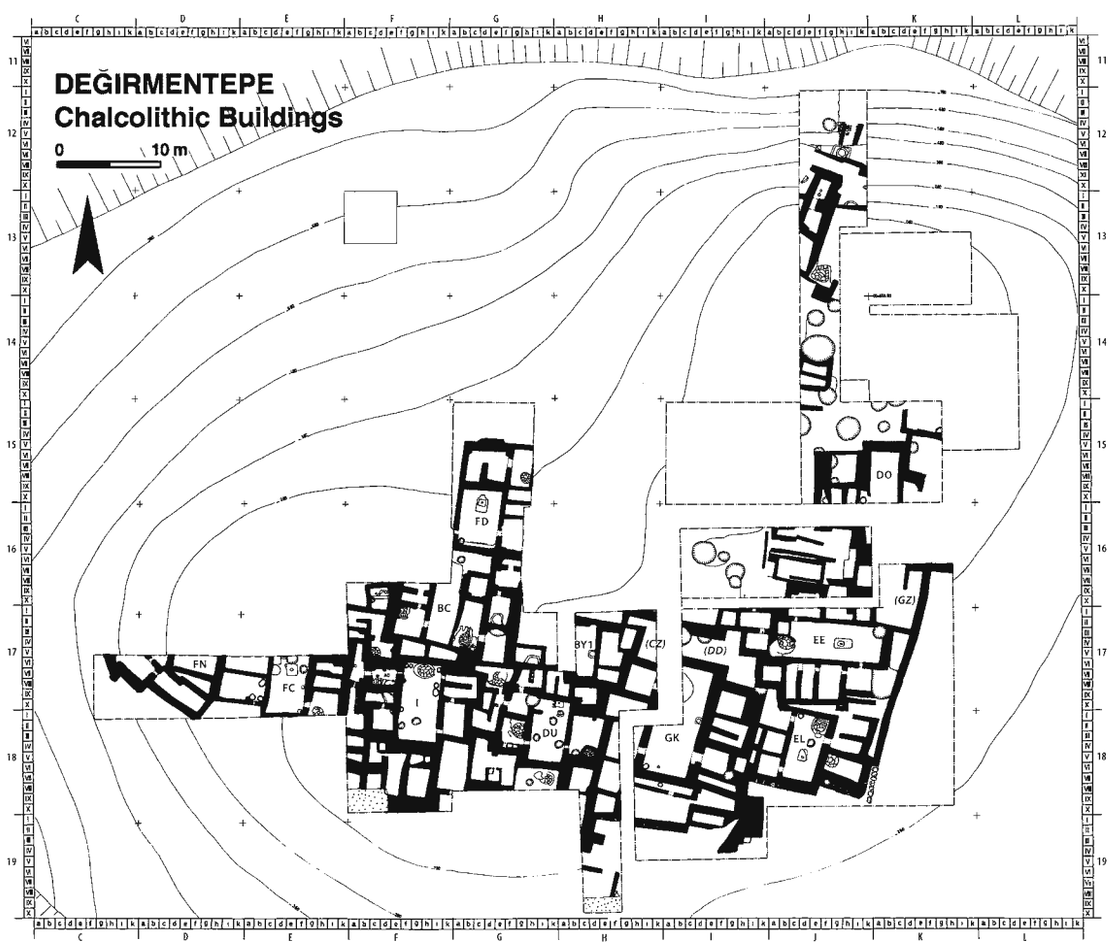


Figure 22.3. Plan of Ubaid-period Değirmentepe showing phases B, C, and D. Phases C and D are the earliest phases and were found only in the sounding in the northeast edge of the mound. Excluded from this plan is the latest phase A, which appeared only in the east portion of the mound by the tripartite building AS

[2] Please note that only the artifacts that received find numbers during the excavations were accessed and included in this study. It would have been preferable to include the complete repertoire of artifacts in the functional analysis had they been accessible. However, I strongly believe that what is in hand is sufficient to draw a broad picture of the most common activities that took place.

oi.uchicago.edu

survived to height of 1.5 m or more. It is highly likely that there were up to eighteen buildings at some point during this occupation.

The arrangement of the buildings in the phase B occupation displays a distinctive spatial organization. The builders attached one building to another to achieve the densest possible use of available space. Only two rather small open areas were trapped between the buildings. The settlement had no streets or alleyways. Although the buildings seem more concentrated in the east and south portions of the mound, the overall result was an agglutinated village layout. Such a use of space is different from that documented at most of Ubaid-period exposures from northern sites in Mesopotamia. An exception exists in some Ubaid levels at Tepe Gawra, the level XII occupation in particular (see Tobler 1950: figs. 8, 15–17).

The southeast quadrant of the settlement was surrounded by a mudbrick wall. Coming without interruption from farther north, it was separated from the eastern buildings, but it became almost appended to building EL by large boulders (quadrants 16–18/J–K in fig. 22.3). The idea of a physical boundary seems to have continued throughout the southern edge but without such a distinct wall. Instead, the southern exteriors of the buildings were built with wide double walls regularly embedded with square-cut wooden poles at the outer sides. Such post holes probably served to support the wide walls, and they were found in the southern walls of buildings EL, GK, and FN farther west. Thus, the southern edge of those buildings creates an irregular boundary line for the village.

The phase B inhabitants of Değirmentepe used two building types: multi-room structures and tripartite structures. The multi-room structures were strictly limited to the southern edge of the village (fig. 22.4). Investigation of these structures was brief, and their southern exteriors were not found during the limited time of the excavation. Thus, the actual plan of each structure is incomplete, and our understanding of their functions remains basic. All that can be said from the available data is that the number of rooms, their size, and their plans show considerable variability. Such non-standardized building forms resulted from the limited space available in the village, and the needs of those who claimed ownership for each of these particular spaces. If those were major factors, then it may

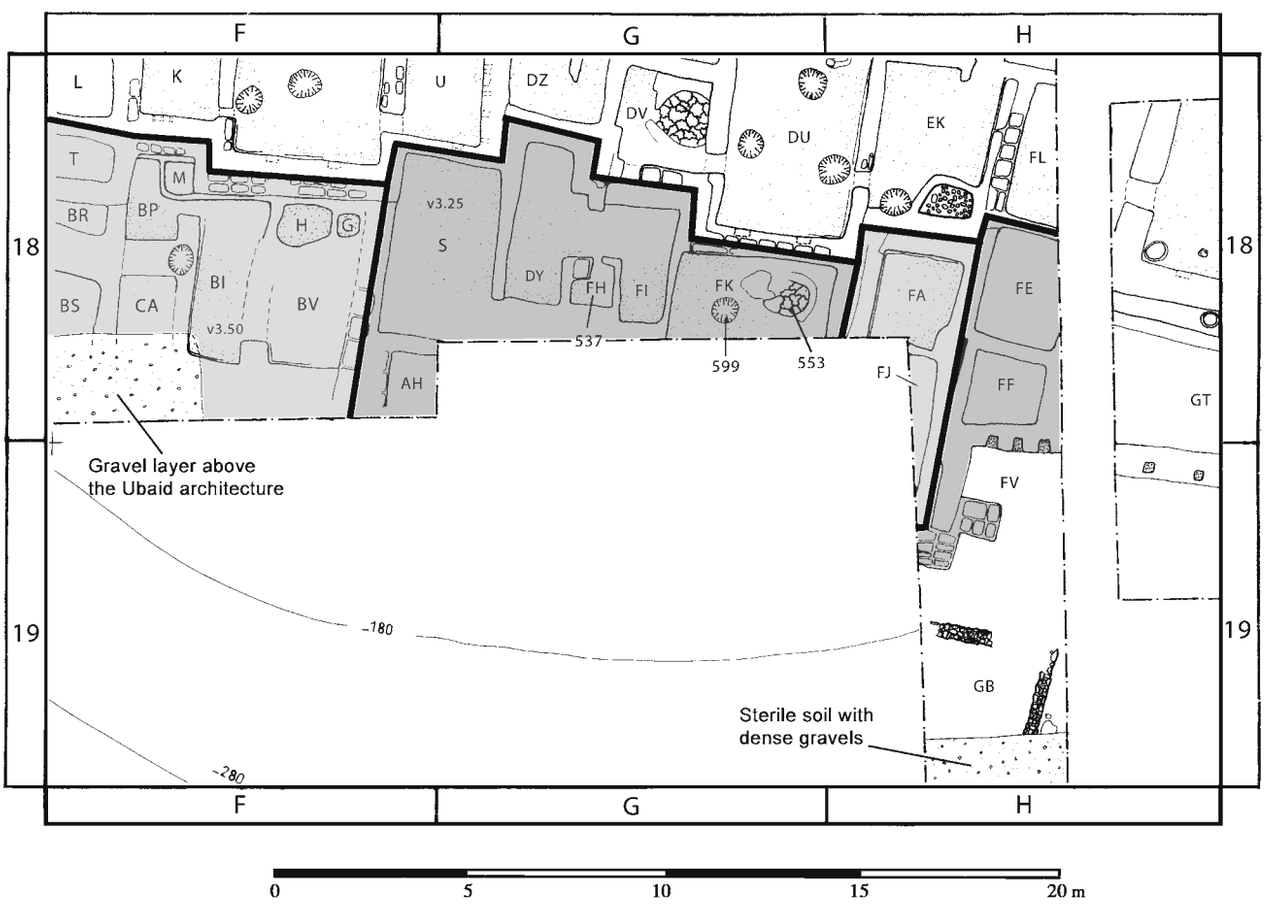


Figure 22.4. Multi-room buildings with irregular plans

oi.uchicago.edu

be further inferred that the spatial arrangements for each building were probably implemented individually as unique cases, resulting in irregular attached buildings.

The other building type had a tripartite structure, consisting of a large central room with rows of smaller rooms built on both sides. Most of those buildings yielded almost complete tripartite plans, although in a few cases this building type revealed variations. Building FD had one row of small rooms on the east side, whereas the west side of the central room was an open space. Located just to the south of this building, building BC presents the second layout variation, which is here tentatively called "four-partite" because it had a central room and three rows of small rooms on the west and east sides of the central room BC. Building FN, located to the very west of the site, may have been a tripartite structure if its central room was indeed located in the immediate north area. Perhaps building DU represents another version of the tripartite plan because its small rooms were not only laid on the east and west flanks but also on the north side. Despite these differences, the basic tripartite form and concept remained consistent throughout the settlement and featured a large, rectangular central room with at least one or more rows of multiple small rooms arranged along its flanks.

Certain types of features were used consistently to furnish the interiors of the buildings. Every building contained a number of small doorways establishing communication from one room to another, and almost every central room revealed a pair of niches formed in the south wall. However, none of the buildings had a door giving entry from the exterior. This makes sense in light of the agglutinated plan of the settlement.

Almost every building had a large, horseshoe-shaped hearth, probably with a dome-shaped superstructure. These were generally located in the central room, but were occasionally found in the smaller rooms as well. It should be noted that some hearths, such as the ones found in rooms DH and BM of building BC and in the area immediately west of the building BC, had a specific function. The evidence clearly indicates that these were not used for cooking but instead for processing copper ore (for the metalworking activities at the site, see Müller-Karpe 1994: 17–22). Tiny built-in tunnels ran from inside the hearths into small adjacent pits, which were used to collect the smelted metal after removal of the non-metal components. The abundant metal slag found inside and around those hearths provides further indications of such activity. Laboratory analysis of samples of the slag is continuing (Esin 1986a, 1986c). Interestingly, no complete manufactured metal objects were recovered from the site, despite the considerable extent of the excavated area.

In some buildings, there were a number of circular clay bins, the bottoms of which were partially preserved. Building I contained most of the bins, five of them in the central room I located near or around the hearth. Based on their proximity to the hearths and ethnographic observations, it is reasonable to suggest that they were used for storing food items, although no food residues were found inside them. There were also a few mudbrick, box-like features attached to the lowermost parts of the long walls. Since they were empty inside, it is difficult to infer if they were really for storage or not (see box-like features attached to the east walls of the central rooms of buildings BY and GK in fig. 22.3).

Most of the central rooms contained low rectangular mudbrick platforms positioned almost in the center of the rooms. The mud platform found in building FD (quadrant 16/G) was considerably larger than the others. With a rectangular depression in the center in which some fragments of ochre pigments were recovered, and a slight projection at its north side, the overall form of the platform might suggest a simplified anthropomorphic form.

The last feature recovered in the buildings were symbolic representations found in the form of wall paintings. Although the paintings were not well preserved, they were encountered on the walls of five different buildings. The pigments used were mainly red and black, and the decoration took the form of dots of various sizes and irregular lines. Since no clear motifs can be distinguished, the themes depicted in these seemingly abstract paintings are not readily comprehensible. It is likely that multiple paintings were made one on top of another, adding to the confusion. The painting from building EE (quadrant 17/J) is perhaps the best-preserved example for multi-layered paintings (fig. 22.5).

The most important discovery from the Değirmentepe tripartite buildings, at least in architectural terms, was the fact that they had been two-story structures. Four tripartite buildings — buildings I, FC, BC, and, on the east side of the village, EE — yielded the relevant evidence. The evidence came in different forms, the most common of which was the presence of numerous holes located next to each other in the upper parts of the walls, presumably to anchor a series of parallel wooden beams that would have supported the ceilings. Additional courses of brick were present above these holes, clearly indicating the bottom levels of a second story. In one case, evidence for a doorway on the upper floor was partially preserved above the ground-floor doorway and the beam holes for the ground-floor ceiling. In building I the floor of the upper story, including the remains of a horseshoe-shaped hearth, had collapsed into the

oi.uchicago.edu

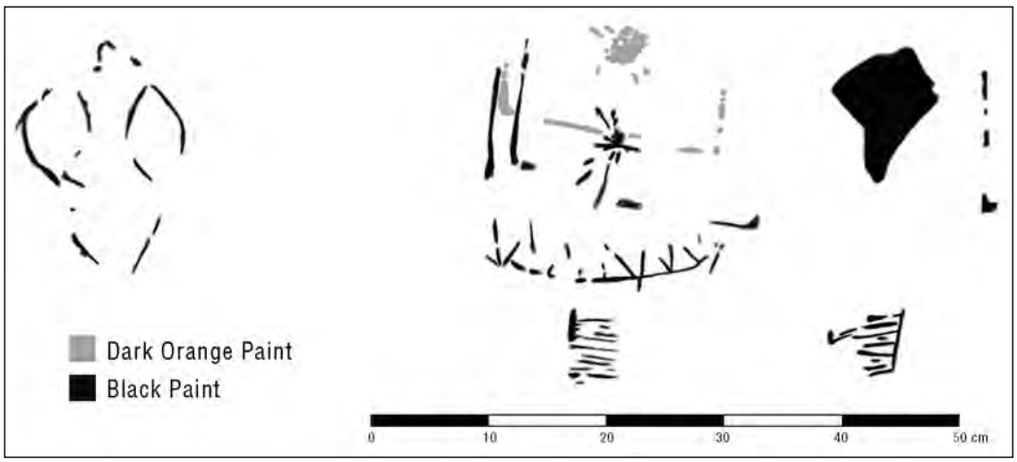


Figure 22.5. Painting found on the south wall (529) of central room of building EE. The designs may have been made at different times

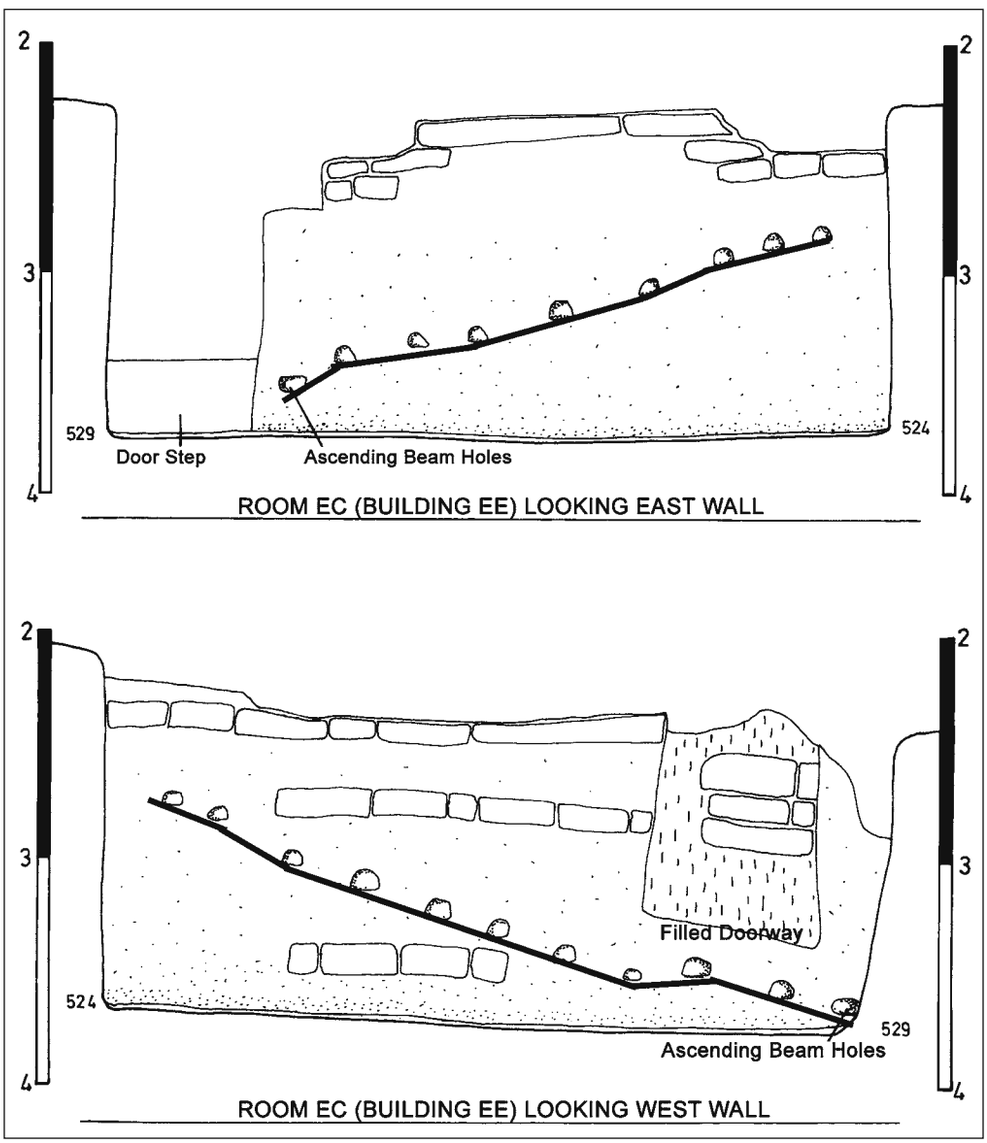


Figure 22.6. Staircase of building EE found in the small room EC

oi.uchicago.edu

ground-floor room I. In addition to these clear indications, room EC of building EE had a simple staircase composed of eleven steps formed from beams that descended from one end of the room to the other (fig. 22.6). It is possible that these steps reached the upper story of the building rather than the roof. There may have been a ramp set under the steps to provide sufficient support for the weight of an adult carrying items up or down the stairs, however, this possibility was not fully investigated during the excavations. Based on these various lines of evidence, I suggest that all other tripartite buildings of the village were probably two-story structures. The architectural plans of the upper stories may be assumed to have been similar to the plans of the first floors as more or less evident in house I.

In rare cases in Mesopotamia, specifically in the Hamrin, we may also have such buildings, but the evidence is elusive. Different scholars have argued that the Tell Madhhur house may have had a second story, but the opposite was indicated by the most recent analysis proposing that the house was a single-story structure with high mudbrick walls (Roaf 1989; see the reconstruction of the house in Roaf 1996: 54). The cruciform building at Kheit Qasim perhaps had a second floor, if the staircase was not built for access to the roof (Forest-Foucault 1980). The evidence from building E at Tell Abada, namely the recovery of the beginning of a mudbrick ramp for a staircase, also allowed the possibility that the building might have had a second story (Jasim 1985: 21, pls. 3a and 15). At present, we have no solid architectural evidence from Mesopotamia that can confirm the presence of an upper story in tripartite buildings. While Değirmentepe alone offers unequivocal evidence at present, there is no particular reason to assume that upper stories did not exist in buildings in some parts of Mesopotamia during the Ubaid period.

FUNCTIONAL ANALYSIS AND USE OF SPACE

To augment the evidence from the architecture, a functional analysis was carried out based on the available data. The goal of this analysis was to shed light on the actual use of space inside the buildings and to determine, when possible, the meanings embedded in them by the users. Only tripartite buildings could be included in the study, because the architectural plans and the artifacts from within the multi-room buildings were too incomplete for such analysis. As mentioned above, only complete artifacts submitted to the local museum with record numbers from primary contexts could be considered (for the full method and an overview of artifacts, see Gurdil 2005: chapter 4 and appendices 1 and 3).

Firstly, those artifacts found in primary contexts inside the buildings were grouped according to their possible use and functions, which were determined based on ethno-archaeological observations made in the Near East (see Verhoeven 1999 for a compilation of such studies). Secondly, each artifact type with specific function(s) was marked by a specific symbol on the building plan to show its exact location (fig. 22.7). Thirdly, artifact types from each building were listed together in basic statistical charts to demonstrate their numeric values and locations.

In most cases, the artifacts implied multiple purposes: considering them alone would have been misleading in determining the functions of any given space. Furthermore, without any results from the detailed analyses of the study materials, such as a detailed study of pottery, our understanding of these contexts remains limited. For these reasons, the possible uses of space suggested by the finds were correlated with clues emerging from the architectural remains and interior layouts. The resulting picture of spatial organization and use that emerged from each building examined was consistent enough to support the drawing of some general conclusions. Some of the results may be debatable, since assumptions, which are sometimes also our biases, had to be included where data were limited. Only building I is considered below, as it is representative of the method applied and the general results extracted from the overall study.

BUILDING I

Building I (quadrants 17–18/F) showed the second-densest artifact distribution with its yield of eighty-one artifacts (figs. 22.7–8). It is important to note here that those artifacts represent only the ground-floor finds, since no reliable contexts from the upper floor were identified. The artifacts from secondary or tertiary deposits were eliminated because their comparative depths compromised reliability. The number of artifacts found in each room varied, and the lowest numbers of artifacts came from rooms AG–AF, AC, and P–L to the west. Thus, the particular functions of these rooms remain unclear, though the excavator believes that rooms AG–AF might have contained

oi.uchicago.edu

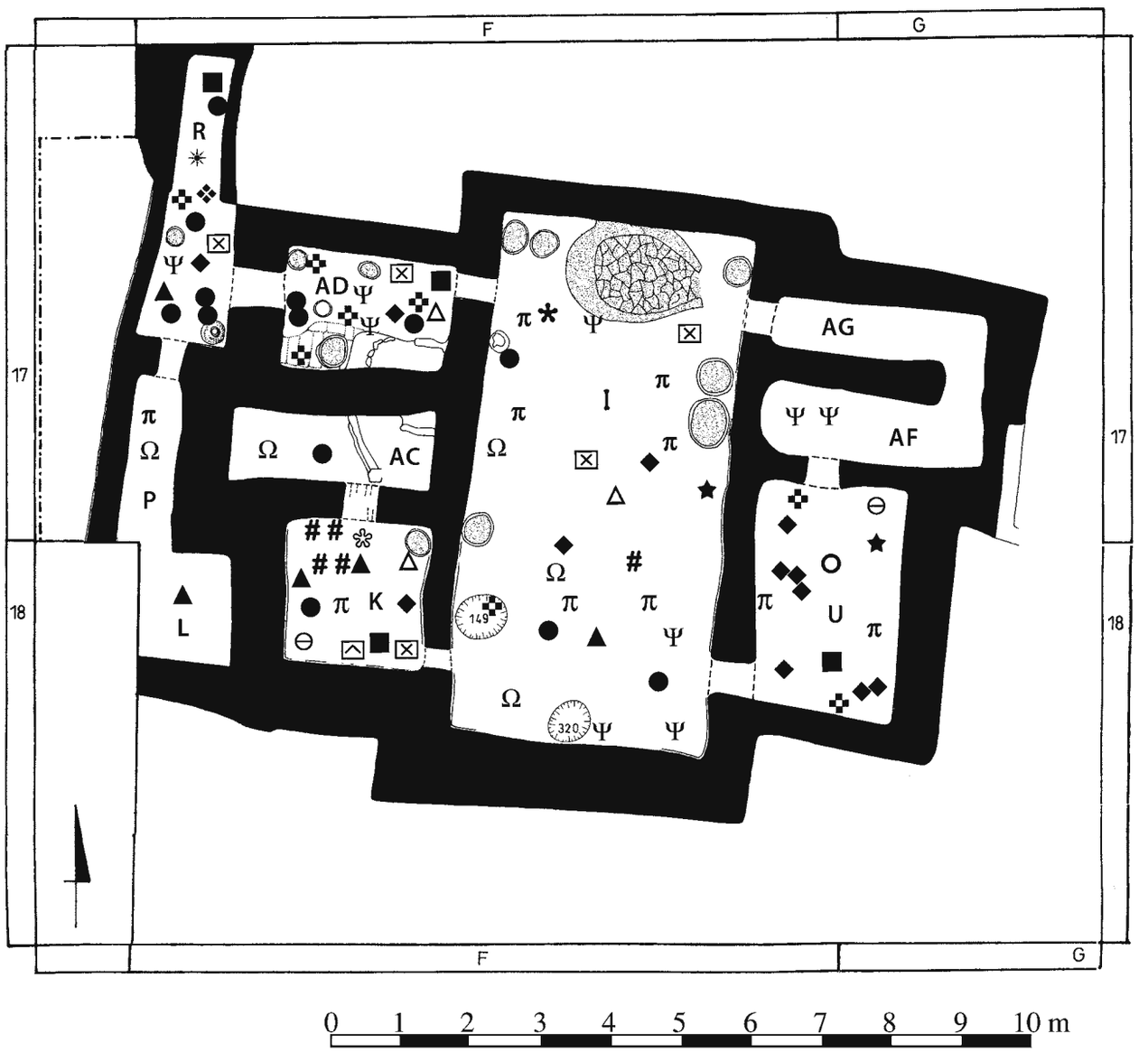


Figure 22.7. Distribution of artifacts in building I

oi.uchicago.edu

the staircase leading to an upper level (U. Esin, pers. comm.). One of these rooms, room AC, had a relatively thin mudbrick division running from north to south with a height of about half a meter, splitting the room into two different spaces. Perhaps this installation should suggest to us different kinds of production activities. A small doorway had opened into room K in the south, but it was sealed with mudbrick at a later time. Thus, the later access to this room must have been from the upper story, room O, built immediately above, suggesting that storage was one of the functions of this room.

Room AD to the north was more crowded with artifacts, which nevertheless do not shed light on the actual use of the platform found in the south half of the space. The bins, a few bowls, and a miniature bowl/jar indicate food production. A spindle whorl adds more to the picture of domestic activity, unless it had fallen from upstairs or been lost there. The recovery of two seal impressions could provide evidence for the arrival of imported goods. The clear indication of ritual behavior was suggested by the number of infant burials, two of them interred inside the bins and the others inside the cooking pots found near the east door (for more information about the burials, see Özbek 1986a, 1986b). At one point this room must also have served for the storage of goods, as indicated by the bins. Additionally, this room was used as a corridor accessed by the doors opening to room R in the west and room I in the east. Thus, room AD seems to have had multiple functions.

Room R in the northwest corner of the building produced five bowls, a storage jar, the remains of a portable oven, and a bin, all suggesting domestic activities related to food production. Again, the bin of this room had a secondary use reflected by the interment of an infant inside. The single occurrences of other artifacts in this room, such as the seal impression, may not necessarily represent any distinct activity; such presences may simply relate to accidents of taphonomy. With the same reasoning, room P-L displays a similar situation, since only a seal and a seal impression were found there. However, in considering the circulation inside the building, these last two dead-end rooms may have been used much less intensely than the others, so the recovery of seals and seal impressions from them is perhaps more strongly suggestive of the arrival and storage of goods.

Artifacts from the southwest room K demonstrate tool production or maintenance. The indicative tools were a celt and a few polishing stones. In addition, a large stone found inside the room (not shown in the plan) was repeatedly recorded in the field notes as having been used as an anvil or as providing a suitable working surface higher than the floor. The domestic use of the room was also evident from the storage jars, a cooking pot, and a mortar, as well as the bin located in the northeast corner of the room. A needle, an awl, and a spindle whorl found here must be regarded with caution because of their single occurrence and small size, although when considered all together they suggest textile production, and thus, domestic behavior. As a result, room K probably functioned as a workshop, but the overlap with domestic activity must also be recognized.

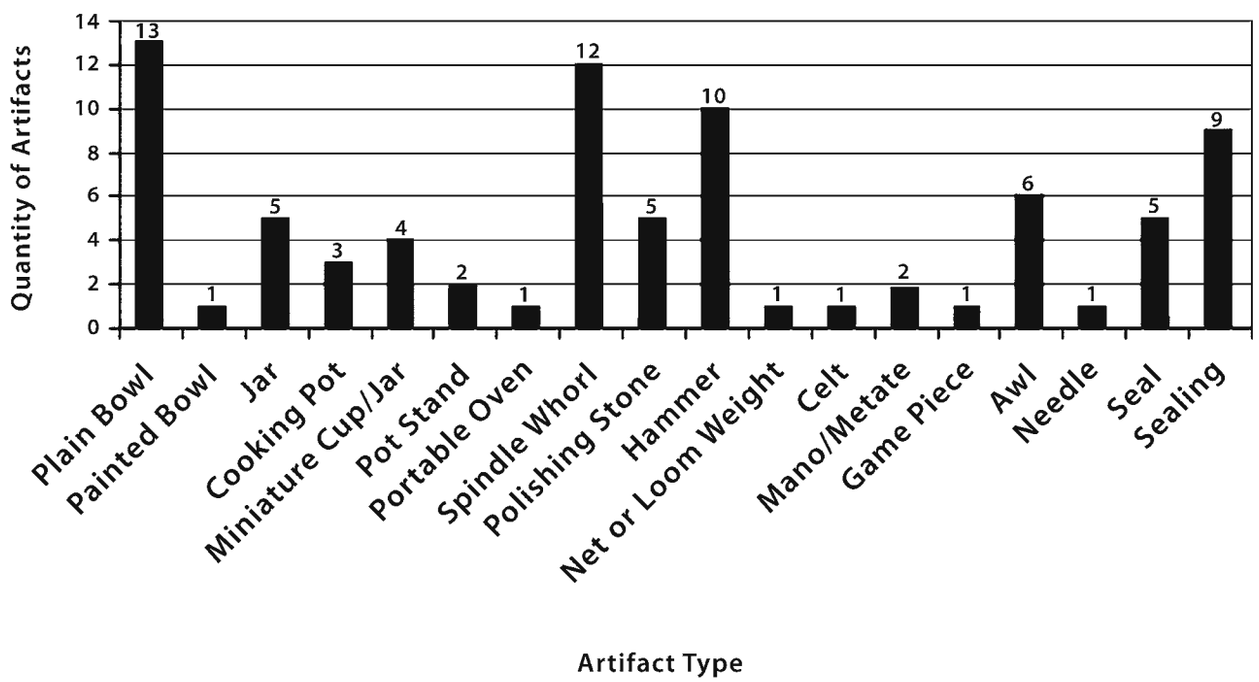


Figure 22.8. Chart showing the distribution of artifact types in building I

oi.uchicago.edu

The seven spindle whorls found in room U constitute a clear concentration of artifacts related to textile production, whereas the two hammer stones imply tool-production or -maintenance activities. The occurrence of a single pestle may be accidental and does not necessarily indicate food production, since other artifact types linked to food processing or cooking were not found in this room. A miniature jar, a painted bowl, and a pot stand might be seen as evidence of food consumption. However, they might also have been associated with the two infant burials made under the floor and in a cooking pot within this room, although the locations of those artifacts do not necessarily match the location of the burials.

Room I must have been used for domestic purposes as well as the manufacture and repair of tools. Plain bowls, a jar, the storage bins, and the hearth to the north of the room are all indicative of storing and processing food and perhaps of its consumption.[3] Additionally, spindle whorls and awls point to textile production. A number of hammer stones and a polishing stone are suggestive of this room's use as a workshop. As seen in previous rooms, the final activity type for this room seems to have been ritualistic. The infant burial found inside pit 149, the careful construction of the other pit 320 into hard virgin soil with a smooth vertical wall, and the paintings recovered in two areas on the east wall are direct indications of ritual behavior. Although the hearths represent the domestic nature of the space use, it is possible that this common feature of Değirmentepe might also have been used during ritual activities, since infant burials and hearths are recovered frequently within the buildings. Thus, the hearth located to the north of the room might imply such behavior. It is worth noting here that the other evidence indicating ritual activity in the buildings included rectangular and slightly raised mudbrick platforms, which were located in the middle of the central rooms of five different tripartite buildings: EE, EL, DU, FD, and FC. It is not clear why there is no platform present in room I (fig. 22.3), although rituals do seem to have taken place there.

It is possible that the double-chambered hearth G-131, attached to the south exterior of building I, might have belonged to this building (fig. 22.9). Unfortunately, the south of the building was not completely recovered, and it is unclear whether this hearth really belonged to building I, or to another structure that may have been located farther to the south but was not well preserved. However, with this caveat, I conclude that the hearth indeed belonged to building I. If this assumption is correct, a distinct activity has to be added to the building: that the hearth was not used for domestic purposes but probably for metal smelting. The evidence of this activity is the unusual form of the hearth, not the recovery of any metal items or slag. It had two chambers connected by a small, 15 cm long tunnel. Its opening was in the west side, and the superstructure might well have consisted of two domes. A small hole made at the north side of the rear chamber opened to the outside. This hole might have been used for controlling the air ventilation inside the hearth as well as for collecting the smelted metal ore. Therefore, if the hearth did belong to building I, then metal production must have been associated with the users of the building. It has already been mentioned above that such activities were identified at other locations (Müller-Karpe 1994), inside the two rooms of building BC and the area immediately west of building BC. In both locations, abundant slag and ash inside and around the hearths provided evidence for metal smelting.

CONCLUSIONS

It must be reiterated that building I, along with its architecture and the artifact types found in it, should be seen as being representative of the other tripartite buildings and the artifacts recovered from them. The activities deduced from building I are repeatedly documented in the other tripartite buildings, allowing them to be called houses too. As a result, I conclude that inside the tripartite houses of Değirmentepe, food items were stored,[4] prepared, cooked,

[3] The plain bowls consist mainly of buff and brick red fabrics; some of those pots had grit temper with signs of regular scraping on certain areas of the exterior or interior. The excavator identified them as "Coba Ware" (Esin 1983; Esin and Harmankaya 1987, 1988). She notes that there were probably a few hundred such pot sherds scattered inside the central room I, but since those fragments could not be matched together at the base camp, the exact number of pots recovered from this room is unknown (U. Esin, pers. comm.).

[4] As evidenced by the recovery of numerous seals and seal impressions, controlled access to certain items or economic transactions within specific exchange mechanisms might also be added to storage activities that may have been taking place repeatedly in an intricate level inside the houses. Elsewhere, U. Esin (1994) provided the data extracted from the seals and seal impressions. In terms of their function and use, I believe that the heavy concentration of such artifacts along with dense ash in room BB of house BC is significant. Readers interested in those artifact types should refer to this publication.

oi.uchicago.edu

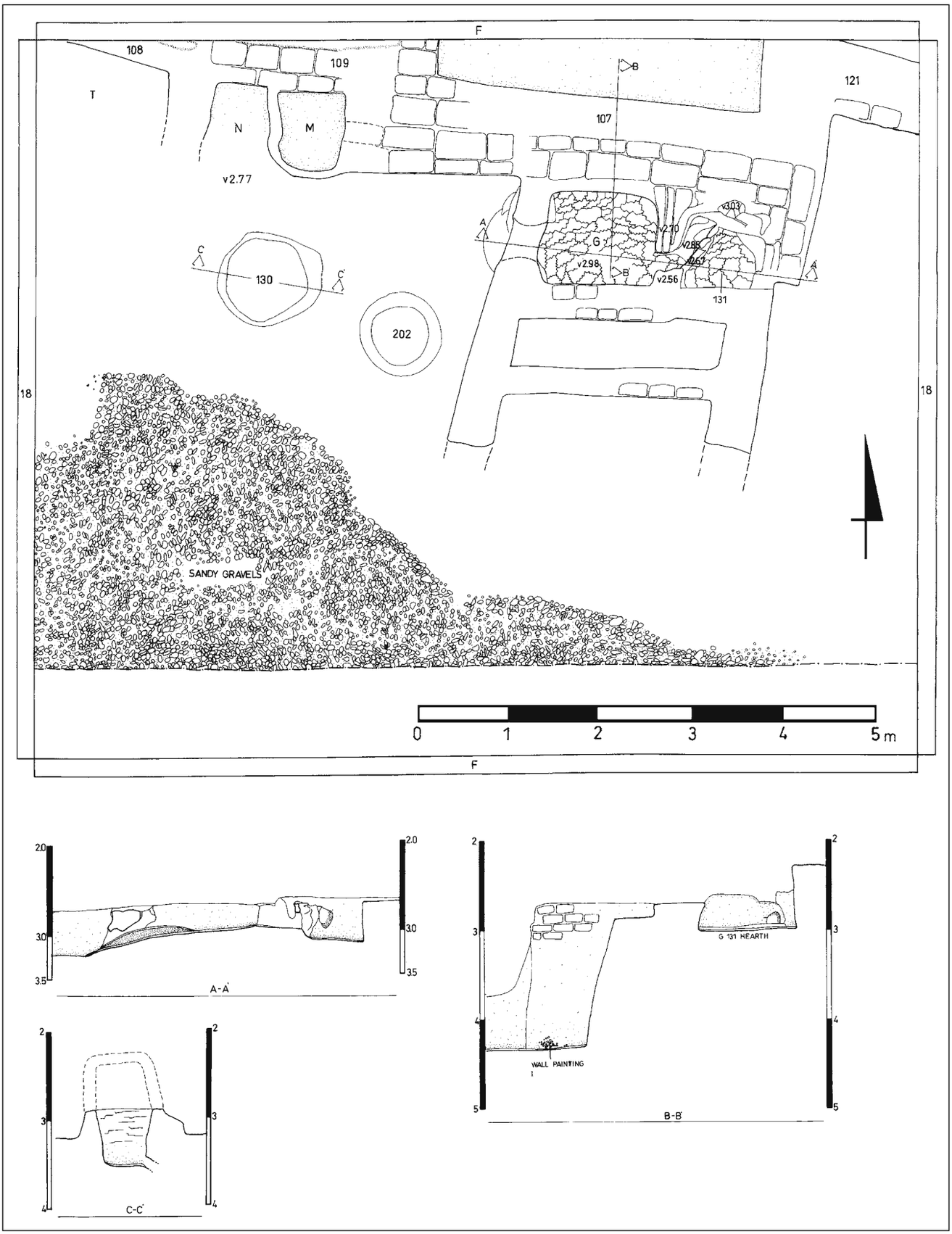


Figure 22.9. Location of hearth G-131 attached to the south wall of building I and related cross sections A–A′ and B–B′

oi.uchicago.edu

and consumed; tools were produced, and some of them were probably repaired; and, when necessary, the activities related to spiritual world were performed, usually in the central rooms.

The ground-floor plan of building I shows that almost every room communicated with another located just next to it. The central room I is especially significant, connecting to each of the rooms at its corners. Such direct communication among the rooms implies that the activities documented inside each room may not necessarily have been restricted to that particular space. Instead, certain steps of an activity may have taken place in one room, and the remaining steps may have been completed in another. Thus, this possibility shows that it is not necessary to assign a single activity type to a specific room; rather, the concentration of activities may have been more diffuse and may have been dispersed throughout more than one room.

When looking at each room individually, it also seems clear that each room space was organized for multiple purposes. This makes sense, because overlapping functions in a space are commonly documented in ethnographic studies. For example, Kent (1984: 133) suggests that activity areas of Navajo households are not necessarily "monofunctional." Kramer (1982: 116) also states that the roofed or unroofed spaces occupied by Aliabad's households were distinct, but yet, "such areas as courtyards, living rooms, and kitchens are used for a range of activities."[5] As a result, the ground-floor room spaces of building I were organized for any major activity that would be necessary for survival, and those indoor spaces commonly functioned as domestic and workshop areas.

Because of the strong representation of the domestic use of the building, it is safe to call building I a house. Nonetheless, whether occasional or not, the ritual activities that took place represent the occupants' spiritual world, adding more layers of meaning to the house. Such spiritual meanings may only have been assigned to certain spaces in the building, such as the central room I or the location where a burial was found. Thus, house I probably functioned as a shrine where the dead were occasionally interred and some ceremonies were carried out during the interment or during other meaningful times. Moreover, it is likely that rituals unrelated to death took place, prayer, for example. For that reason, house I may be called a shrine-house, where religious and non-religious acts were interwoven in daily life.

With the term shrine, I am attempting to distinguish the function of a temple from the use of a house. In the case of a temple, the primary behavior — religious activity — must have been constant or routine, and access may have been unrestricted for community members. If any other forms of activity took place there, for example economic transactions, these could be seen as additional and of secondary importance when characterizing the use and function of the temple. In the case of a shrine-house, I suggest that the primary activity type was domestic, in which food was processed and eaten and the occupants manufactured items, socialized, and slept. The religious and ritualistic use of the same spaces would have been of secondary importance. Furthermore, these activities may well have been restricted to members of the household, unless non-members were specifically invited to take part.

The physical retrieval of the upper floor was limited, as neither the room spaces nor their contents were recovered, except for the unconvincing instances of one or two artifacts associated with room O of house I. It is nonetheless reasonable to suggest that some of the activities related to food production and consumption would have taken place on the second floors. Since the first floors did not have windows or any openings for receiving daylight and air, the second floors probably had some openings installed on the higher portions of the walls. If this was the case, then some tasks requiring light and attention to detail, such as textile production, may have been carried out on the second floors. In addition, it seems reasonable to speculate that the upstairs would have provided spaces for sleeping and socializing, including entertaining guests. In this scenario, the upper floors may be imagined as much livelier spaces than the darker ground floors.

Based on the limits set by the village architecture, the roofs must have been flat in order to provide village-wide communication among the houses, as well as entrances into the houses. These flat roofs must have offered a third horizontal level, which would have provided space for certain activities. As long as weather conditions permitted, activities such as food preparation and consumption, socializing, and sleeping could have taken place on the flat roofs. The latter suggestion is not difficult to envisage, as the roofs of the houses in the Near East today are used in this manner. The plans of the roofs are impossible to discern due to lack of architectural evidence, but the village might have consisted of many flat-roofed houses varying in height and size.

---

[5] Although named for a specific activity, such as a living room, I occasionally observed in southeast Turkey that rooms were in use for multiple activities. It seemed that the number of activities of a specific space tended to decrease or increase depending on the economic well-being of the household. In other words, the wealthier the household, the more separately defined spaces and the fewer activities within a given room space in the house.

oi.uchicago.edu

The agglutinated layout of the Değirmentepe village had only two locations with open spaces surrounded by the houses. These were area GZ to the northeast of house EE and area DD-CZ to the north of house GK. Area BH-BO to the north of house BY may also have been an open space. Insufficient recovery or preservation of artifacts from these spaces hinders the determination of the activities that took place there. However, access to these spaces may have been restricted to those who occupied the surrounding houses. There is a possibility that the northwest quadrant of the village was a large open space without any substantial architecture. If so, this location might have functioned for gatherings involving large groups, such as ceremonies, feasts, and other purposes. In addition, animals may well have been kept in this open space inside insubstantial enclosures such as pens and coops. The two facts that the houses lacked doors and that the only connection to the outside was probably through the roofs clearly indicate that animals were not kept in the houses but elsewhere in the village.

For a population estimate of the phase B of Değirmentepe, Naroll's (1962) 1 person per 10 sq. m of roofed area was applied. This formula suggests that the hypothetical population of the village might minimally have reached as many as 130 individuals at some point.[6] Making extrapolations about the type of households that lived at Değirmentepe is not straightforward. The extended family structure may nonetheless be suggested, for two reasons. First, if the population proposed above is realistic, then each house would have comprised between five and twenty-two individuals, which implies extended families. Second, if, as I have assumed, the tripartite houses were all two-story structures with arrangements of multiple rooms in each of them, then they could certainly have accommodated such extended families. It may further be conjectured that an extended household might have consisted of multiple families connected by blood and marriage ties, with each living in a separate house structure. Thus a household might have owned and occupied more than one house within the village.

Overall, the artifact assemblages and the architectural evidence imply that egalitarian values were accepted in the Değirmentepe society. None of the artifacts from the site is representative of prestige. In terms of architecture, structures with wide and elaborated walls with a monumental aspect are not found at Değirmentepe, and chiefly houses or temples with any distinct public function are absent. Therefore, the question of whether this society was chiefly cannot be resolved by the measures of prestige items or special architecture. If the extended family was indeed the norm for these households, perhaps each can be imagined with a leader who would make the decisions within the families. Those family leaders may have formed a higher decision-making group to deal with community matters. Thus, it is possible that there may have been an implicit decision-making procedure run by more than one individual or family, instead of a single community leader. The heads of individual families may have had the final, conclusive votes both in household- and in community-scale decisions.

These possibilities do not preclude the Değirmentepe community having been part of a chiefdom. Some have suggested that the visibility of chiefdoms is low in the archaeological record of the Near East, in contrast to examples from Mesoamerica and Polynesia (Stein 1994; Flannery 1999). If such political entities existed in north Mesopotamia and/or eastern Turkey during the fifth millennium B.C., their presence may not be readily apparent from the archaeology. Of course, Değirmentepe might have simply been part of a chiefdom, or a satellite of such a political entity, thus supporting a leader and associated facilities located elsewhere. Perhaps the metal items that were apparently being manufactured, but were not found, at Değirmentepe were being sent to such a place. Thus, it is possible that we may find symbolic items that conveyed prestige or represented power at other sites in the region. Since no other contemporary sites in this region have yet been extensively excavated, the reasoning behind regional social and political organization can go only so far. These final remarks about social organization during the Late Ubaid horizon in eastern Anatolia therefore remain to be substantiated or refuted through future research.

[6] The total area of the two-story buildings was calculated by multiplying the ground floor areas by two. The buildings without evidence of a second story were assumed to be one-story buildings, and only the total area of their ground-floor spaces was used in the population estimate. Building FN in the west and probably three others in the northeast of the site were added into this estimation by assigning them 10.1 individuals, which is the average number of individuals that lived in the houses. These additions were necessary to reach a complete population estimate, although the degree of conjecture involved may constitute a weakness of this study.

oi.uchicago.edu

BIBLIOGRAPHY

Esin, Ufuk

1983 "Zur Datierung der vorgeschichtlichen Schichten von Degirmentepe bei Malatya in der östlichen Türkei." In *Beitrage zur Altertumskunde Kleinasiens: Festschrift für Kurt Bittel*, edited by R. M. Boehmer and H. Hauptmann, pp. 175–90. Mainz am Rhein: Philipp von Zabern.

1985 "Some Small Finds from the Chalcolithic Occupation at Degirmentepe (Malatya) in Eastern Turkey." In *Studi di paletnologia in onore di S. M. Puglisi*, edited by M. Liverani, A. Palmieri, and R. Peroni, pp. 253–63. Rome: Università di Roma, La Sapienza.

1986a "Degirmentepe (Malatya) Kazıları Arkeometrik Araştırmalarına Toplu Bakıs." In *Arkeometri Ünitesi Bilimsel Toplantı Bildirileri VI*, pp. 131–53. Tübitak Publications 622. Istanbul: Boğaziçi University. [In Turkish]

1986b "Doğu Anadolu'da Bulunan Obeyd Tipi Çanak Çömlek ve Degirmentepe (Malatya) Kazıları." In *IX. Türk Tarih Kurumu Kongresi*, pp. 81–92. Ankara: Türk Tarih Kurumu Yayınları. [In Turkish]

1986c "Doğu Anadolu'ya ait Bazı Prehistorik Cüruf ve Filiz Analizleri." *Anadolu Araştırmaları* 10: 143–69. [In Turkish]

1994 "The Functional Evidence of Seals and Sealings of Değirmentepe." In *Archives before Writing* (Proceedings of the International Colloquium, Oriolo Romano, October 23–25, 1991), edited by P. Ferioli, E. Fiandra, G. G. Fissore, and M. Frangipane, pp. 59–81. Turin: Scriptorium.

Esin, Ufuk, and S. Harmankaya

1987 "1985 Degirmentepe (Malatya-Imamlı Köyü) Kazısı." In *VIII. Kazı Sonuçları Toplantısı*, Volume I, pp. 95–138. [In Turkish]

1988 "Degirmentepe (Malatya) Kurtarma Kazısı 1986." In *IX. Kazı Sonuçları Toplantısı*, pp. 79–126. [In Turkish]

Flannery, Kent V.

1999 "Chiefdoms in the Early Near East: Why It's so Hard to Identify Them." In *The Iranian World: Essays on Iranian Art and Archaeology Presented to Ezat O. Negahban*, edited by A. Alizadeh, Y. Majidzadeh, and S. M. Shahmirzadi, pp. 44–63. Tehran: Iran University Press.

Forest-Foucault, Ch.

1980 "Rapport sur les fouilles de Kheit Qasim III - Hamrin." *Paléorient* 6: 221–24.

Gurdil, Bekir

2005 Architecture and Social Complexity in the Late Ubaid Period: A Study of the Built Environment of Degirmentepe in East Anatolia. Ph.D. dissertation, submitted to the University of California, Los Angeles.

Jasim, Sabah A.

1985 *The Ubaid Period in Iraq*. British Archaeological Reports, International Series 267 (i–ii). Oxford: British Archaeological Reports.

Kent, S.

1984 *Analyzing Activity Areas: An Ethnoarchaeological Study of the Use of Space*. Albuquerque: University of New Mexico Press.

Kramer, C.

1982 *Village Ethnoarchaeology: Rural Iran in Archaeological Perspective*. New York: Academic Press.

Müller-Karpe, A.

1994 *Altanatolisches Metalhandwerk*. Offa-Bücher 75. Neumünster: Wachholtz.

Naroll, R.

1962 "Floor Area and Settlement Population." *American Antiquity* 27: 587–89.

Özbakan, M.

1985 "ODTU Fizik Bölümü Radyokarbon Araştırma Laboratuvarı Tarihlendirme Sonuçları." In *Arkeometri Ünitesi Bilimsel Toplantı Bildirileri V*, pp. 103–08. Tübitak Publications No. 613. [In Turkish]

oi.uchicago.edu

Özbek, M.

1986a "Degirmentepe Eski Insan Topluluklarının Demografik ve Antropoloji Açıdan Analizi." In *I. Arkeometri Sonuçları Toplantısı*, pp. 107–30. [In Turkish]

1986b "Degirmentepe İnsanlarının Antropolojik Açıdan Analizi." *Arkeometri Ünitesi Bilimsel Toplantı Bildirileri VI*: 89–98. Tübitak Publications No. 622. [In Turkish]

Roaf, Michael

1989 "Social Organization and Social Activities at Tell Madhur." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 91–146. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

1996 *Cultural Atlas of Mesopotamia and the Ancient Near East*. Oxfordshire: Andromeda Oxford Limited.

Stein, Gil J.

1994 "Economy, Ritual and Power in 'Ubaid Mesopotamia." In *Chiefdoms and Early States in the Near East; Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 35–46. Monographs in World Archaeology 18. Madison: Prehistory Press.

Tobler, Arthur J.

1950 *Excavations at Tepe Gawra*, Volume 2: *Levels IX–XX*. Publications of the Baghdad School, Excavations 1. Philadelphia: University of Pennsylvania Press.

Verhoeven, Marc

1999 *An Archaeological Ethnography of a Neolithic Community: Space, Place and Social Relations in the Burnt Village at Tell Sabi Abyad, Syria*. Leiden: Nederlands Historisch-Archaeologisch Instituut te Istanbul.

oi.uchicago.edu

23

GODEDZOR, A LATE UBAID-RELATED SETTLEMENT IN THE SOUTHERN CAUCASUS

CHRISTINE CHATAIGNER, *Maison de l'Orient et de la Méditerranée, Lyon, France*
PAVEL AVETISYAN, *Institute of Archaeology, Yerevan, Armenia*
GIULIO PALUMBI, *Università, La Sapienza, Rome, Italy*
HANS-PETER UERPMANN, *University of Tübingen, Germany*

INTRODUCTION

The 2004 discovery by a French-Armenian mission of the site of Godedzor in southeastern Armenia (Vorotan Valley), which produced painted sherds, some of which are related to a late phase of the Ubaid period, as well as chaff-tempered ware in abundance, casts new light on the relations that existed at the end of the fifth millennium between Transcaucasia and the northern Near East.

The Chalcolithic period (fifth to the first half of the fourth millennium B.C.) remains among the least understood phases of development in the prehistory of Transcaucasia. The recent proposal by Kiguradze and Sagona (2003) to fix the beginnings of the Chalcolithic at about 4800 B.C. appears reasonable in relation to Near Eastern chronology. The Sioni cultural complex, which should represent the Early Chalcolithic period (ca. 4800–4000 B.C.) in the Kura Basin (Kiguradze 2000; Kiguradze and Sagona 2003) and the Middle Araxes Valley (Badalyan et al. 2004; Narimanov 1987), is featured by flimsy structures and a grit-tempered pottery production (obsidian is very common in the paste), decorated with incised rims, knobs, and combing of the external surfaces. At the same period in the steppes of Azerbaijan, the use of plant temper in pottery is widespread, and the presence of red-slipped ware (Ilanly Tepe, Kyulli Tepe, etc.), Dalma impressed ware (Ilanly Tepe, Ezgennitepe, etc.), and Dalma painted ware (lower level of Alikemek Tepesi) are evidence of contacts with northwest Iran (Narimanov 1987).

GEOGRAPHICAL LOCATION

The Vorotan River takes its source at about 3,000 m above sea level on the high volcanic plateaus of Syunik, in the southeast of the Lesser Caucasus. It crosses vast outcrops of obsidian (the Satanakar and Sevkar volcanos) before flowing into a wide glacial valley oriented northeast–southwest. The site of Godedzor is situated here, at an altitude of about 1,800 m above sea level, northwest of the village of Angeghakot, on the upper terrace of a canyon, cut in the basaltic lava flows. The area occupied by the site has served for several years as a basalt quarry, and a large part of the archaeological remains has been destroyed. A rescue excavation was thus carried out in one of the most threatened sectors; but the extension of the area, on which Chalcolithic sherds were discovered (ca. 12 ha), gives hope that other zones of occupation may have been preserved.

At the outlet of the canyon a ford enables an important road from the steppes of Azerbaijan (region of Agdam) to cross the Vorotan (fig. 23.1) and to follow the valley of one of its tributaries in the direction of the Bichenak pass, which is locally the only route toward the Arax Valley to the south (Nakhichevan region). The inhabitants of Godedzor thus settled near a major axis of communication, which crosses the mountains of Zangezour from east to west and links the Kura Basin to that of the Arax. In Nakhichevan, this line of communication joins the main route from eastern Turkey (Erzurum), which follows the valley of the Arax and leads to northwest Iran (Tabriz), crossing the Arax at Djulfa and edging toward the Lake Urmia Basin.

oi.uchicago.edu

Figure 23.1. Main routes of communication between the region of Godedzor and the northern Near East

FIELDWORK AND STRATIGRAPHY

In 2004, an initial rescue excavation was carried out on the upper terrace of Godedzor, which had been partly destroyed by bulldozers. The remains of a circular building with stone walls were brought to light, with an occupation floor covered with obsidian artifacts, objects used for grinding, and crude pottery with a high content of plant temper. In an excavation below the terrace, among the many sherds that probably came from a habitation destroyed by the bulldozers, charcoal was found that was dated to 4,610±35 B.P., that is, 3500–3347 cal. B.C. (Ly-2760),[1] which constitutes a *terminus ante quem* for the site.

In 2005 and 2006, excavations were undertaken on a platform adjacent to the preceding excavation. Two trenches of 45 sq. m each (A and B) were opened, which revealed two phases of occupation:

1. between 0 and 50/55 cm, a construction level of the mid-first millennium B.C. with large rectangular buildings having double-faced walls and a paved floor, on which was found pottery of the Iron Age and the Achaemenid period;
2. between 50/55 and 95 to 150 cm in depth according to the sector (virgin soil was not reached), the foundations of the preceding walls had disturbed a level that produced a few circular walls constructed of a single range of stones and a large amount of Chalcolithic material, including chaff-tempered ware, many clay and bone spindle whorls, several clay hearth stands, and bone artifacts with incised decoration.

[1] The dating of the deepest horizons, reached in 2005 and 2006, is in progress.

oi.uchicago.edu

These remains are evidence of the presence at Godedzor of a material culture that is completely different from the Transcaucasian complex of Sioni and is related to the Near Eastern tradition. We thus attempt to define the following:

1) the elements of this Ubaid-related presence,
2) the exchange networks in which the Godedzor community was involved, and
3) the practical means of interaction.

MATERIAL CULTURE AND UBAID-RELATED ELEMENTS AT GODEDZOR

The material culture of Godedzor is obviously of Near Eastern affinity, but the exact links with the Ubaid are seen only in the pottery, and only in a limited way. No element of the Ubaid material-culture assemblage is present at Godedzor, for example, tripartite houses, bent clay nails, cone-headed clay figurines, clay sickles, sling balls, or clay tokens (Jasim 1985; Stein 1994: 37). The inhabitants of Godedzor seem rather to belong to one of the "Ubaid-related" communities that developed during the fifth millennium at the periphery of the Syro-Mesopotamian world.

PLAIN WARE

All the Chalcolithic pottery from Godedzor is handmade, and the pots are generally hand built (especially in the case of the medium and large vessels) by means of superimposing slabs of clay; these often break at the junction point. In some cases, especially when slips were applied, the presence of fine parallel lines on the surfaces suggests that some slow-rotation device was also used in the fabrication process. Most of the pots have been hastily and roughly made without any particular care taken in the surface treatment, the finishing, or other aesthetic or formal details of fabrication.

Technological Features

Chaff-tempered Ware

This is the most common group in the Godedzor pottery. The pots are characterized by the constant and abundant presence of chaff (more than 90%) in the clay, and seed impressions are also sometimes visible. Plant inclusions range from small or medium to very coarse, and generally their dimensions vary in accordance with the dimensions of the vessel and the width of the cross sections (fig. 23.2a). Rarely, mineral inclusions (tiny fragments of obsidian, fine and medium black sand, mica inclusions, and medium/coarse pebbles) are seen in the clay.

External surfaces are often characterized by reddish, gray, or blackish patches that could have been the result of open firing and of uncontrolled firing atmospheres. There are also cases of sherds with single (external or internal) very dark or black surfaces, which could suggest alternating firing atmospheres, but it is still not clear whether this bicolored effect was obtained deliberately. Internal and external surfaces colors range from pink (2.5YR 6/4, 7/6, 7/8; 5YR 6/4, 6/6, 6/8, 7/4, 7/6, 7/8; 5YR 7/6; 10R 6/6, 6/8), to reddish brown (10R 5/8; 2.5YR 5/6, 5/8), to brown (2.5YR 5/4; 5YR 5/3; 7.5YR 7/6), to orange (2.5YR 6/6, 6/8), and to buff (10YR 7/2, 7/4). Cross sections often show a non-oxidized gray to blackish core, which confirms that firing (perhaps because too brief or carried out at low temperatures) did not manage to attain fully oxidizing atmospheres. Surface treatment and finishing are unusual and generally consist of wet-smoothing and slip-burnishing. Slips are often very difficult to detect, as the tiny film of clay is often the same color as the clay used to make the vessel. Burnishing is present only when the surface is slipped.

Such poorly fired, straw-tempered pottery, the use of the slow wheel, and the rarity of decorated vessels are features common not only to the whole of the Syro-Mesopotamian world in the Late Ubaid period, but also to its periphery, in the northern and central Zagros (Akkermans and Schwartz 2003; Rova 1999–2000; Henrickson 1983). This trend has been related to the new needs of large-scale and low-cost pottery production and the massive use of chaff for tempering purposes allowing a shorter firing time and the saving of fuel.

oi.uchicago.edu

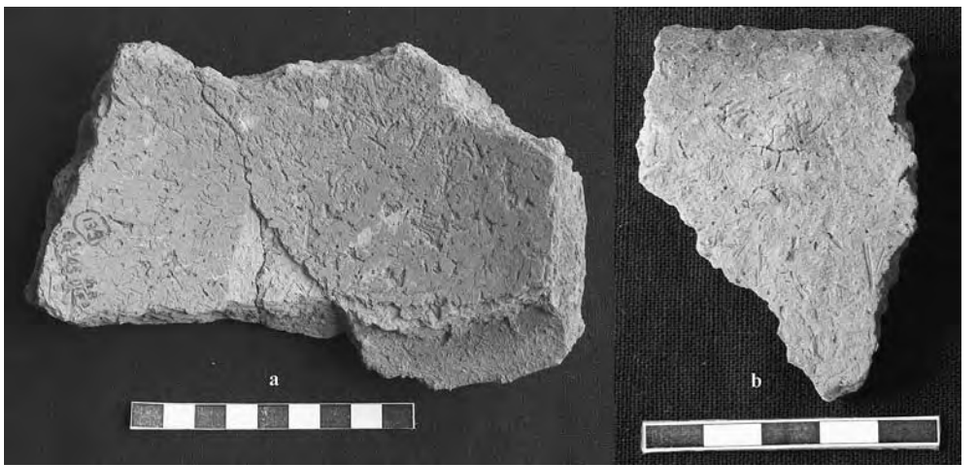


Figure 23.2. Ceramic technology at Godedzor: (*a*) coarse chaff-tempered ware, (*b*) chaff-and-grit tempered ware

Cream/White-slipped Ware

Cream/white-slipped ware, practically identical to the coarse chaff-tempered ware, is characterized by the frequent presence of a thick, whitish cream or pinkish slip (10YR 8/3, 8/4) on the external surfaces of the vessels (medium and large jars only). These are essentially containers that could have been intended for the transport or conservation of food and produce, and it is possible that this special surface treatment was intended to render the containers more protective and hygienic for the storage of food.

Chaff-and-grit–tempered Ware

Chaff-and-grit–tempered ware is characterized by the presence of both medium and very fine plant inclusions (but coarse plant temper is sometimes also present) and mineral temper (40/50%), which consists of small pebbles, gray or black sand probably (taking into account their percentages) intentionally added to the clay (fig. 23.2b). The remaining technological features are very similar to those already described for the chaff-tempered ware.

Grit-tempered Ware

Grit-tempered ware is characterized by the almost exclusive presence of fine and medium mineral temper (coarse inclusions are rare) consisting of small (whitish, black, or gray) sand particles and mica inclusions. Color surfaces vary from pink (5YR 6/6, 7/4, 7/6) to light brown (7.5YR 6/4), to brown (5YR 5/3, 5/4, 6/6), to reddish brown (10R 5/4), to dark gray (7.5YR 5/1, 5/2, 5/3). Usually vessels from this group have thinner sections than those of the other groups.

Decoration

A few sherds, which belong to the chaff-tempered or the chaff-and-grit–tempered groups, are decorated with applique or impressed motifs. Sherds with applique present small (2 cm maximum) circular and oval lumps/pellets of clay stuck (apparently without following any precise pattern) on the external surface of the vessel (fig. 23.3a). The finger-impressed pottery is characterized by medium-sized finger impressions on the external surface of the pot.

Some cream/white-slipped ware jars present a dense number of small circular impressions on the external surface of the base (fig. 23.3b). But rather than a decoration, this feature could have been functional, for example, to protect against slippery floors and surfaces. Such a technique is attested in the central Zagros during the Seh Gabi phase (second part of the fifth millennium B.C.; Henrickson 1983: fig. 53:1). These applique and impressed decorations have strong analogies with the productions of Dalma Tepe, on the southwestern shore of Lake Urmia, where the "Dalma surface-manipulated" pottery seems to be typical in contexts of the mid-fifth millennium B.C. (Hamlin 1975; Voigt and Dyson 1992). This pottery style, or the diffusion of the idea for such decoration (perhaps simpler to learn than would be a painted style), went through southern Azerbaijan and eastern Kurdistan into the northeastern valleys of Luristan, then down the Khorasan Road into the Hamrin (Abada I–II) and north along the Zagros pied-

oi.uchicago.edu

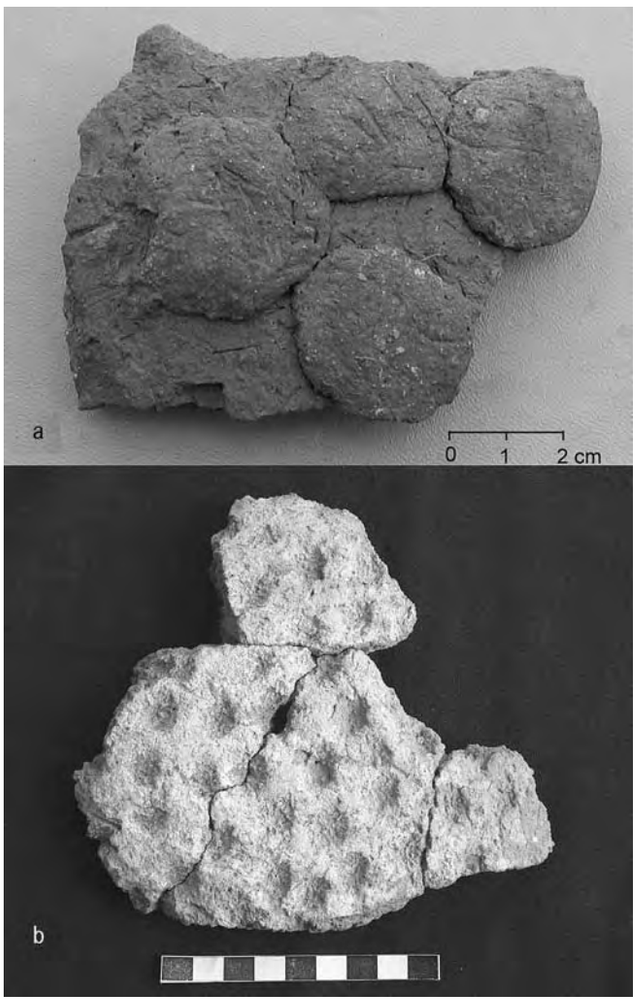


Figure 23.3. Ceramic decoration at Godedzor: (*a*) applique motifs (chaff-tempered or chaff-and-grit–tempered groups), (*b*) impressed motifs (cream/white slipped group)

mont into the Kirkuk area (Nuzi) in small amounts (Henrickson 1983, 1989). But this pottery also diffused, along with the Dalma painted ware, toward northern Azerbaijan, as it is present on several sites of the steppes extending from the Lesser Caucasus to the Caspian Sea (Narimanov 1987).

Morphological Repertoire

In the morphological repertoire of the Godedzor pottery, there is a strong prevalence of closed shapes (jars) over open ones (bowls), both with simple rims. The typologies are well defined, and the same profiles are often repeated in a wide range of sizes. Chaff-tempered and chaff-and-grit–tempered jars with a short, flaring neck, simple rim, and ovoid body represent one of the most common types of the local repertoire; very high variability is observable at the angle of juncture between neck and shoulder (fig. 23.4a–f). From the presence of very thick fragments of chaff-tempered ware, it is possible to hypothesize the presence of large pithoi. Open shapes are represented by hemispherical bowls with simple rims and by flat bowls with convex walls and simple rims (fig. 23.4g–h). Both types are fabricated in either chaff-tempered or in chaff-and-grit–tempered ware.

It is important to stress the relatively common presence of lugs and handles on the medium and large jars (fig. 23.5a–b). Moreover, a jar with three handles on the shoulder has no parallels in the Chalcolithic repertoires either in the southern Caucasus or in the neighboring regions (northern Iran and northern Mesopotamia; fig. 23.5c). Lugs and handles foreshadow traits that will be typical of the pottery assemblages of the earliest Kura-Araks culture (Kiguradze and Sagona 2003).

It is still too early to hypothesize on the existence of connections and continuities between the Godedzor ceramics and the later Kura-Araks ones. Handles on the Godedzor ceramics indicate the basic need for transportability,

oi.uchicago.edu

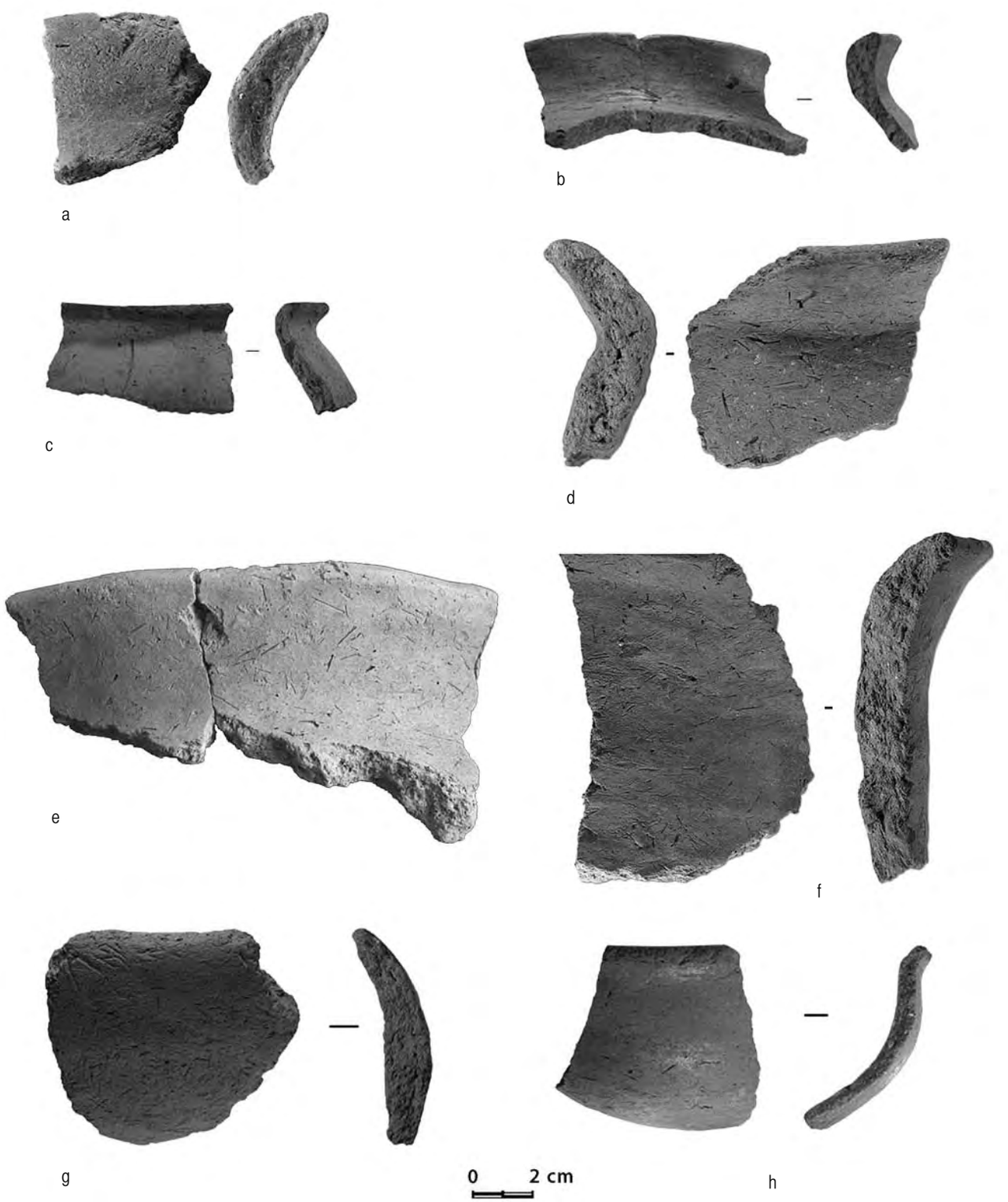


Figure 23.4. Morphological repertoire of Godedzor ceramics: (*a–e*) jars with low everted necks, (*f*) jar with high vertical neck, (*g*) hemispherical bowl with slightly inverted rim, (*h*) hemispherical bowl with everted rim

oi.uchicago.edu

understandable in a social and economic milieu that was probably characterized by transhumance and territorial mobility. These same practices and ways of life will also be common among the later Kura-Araks communities.

PAINTED WARE

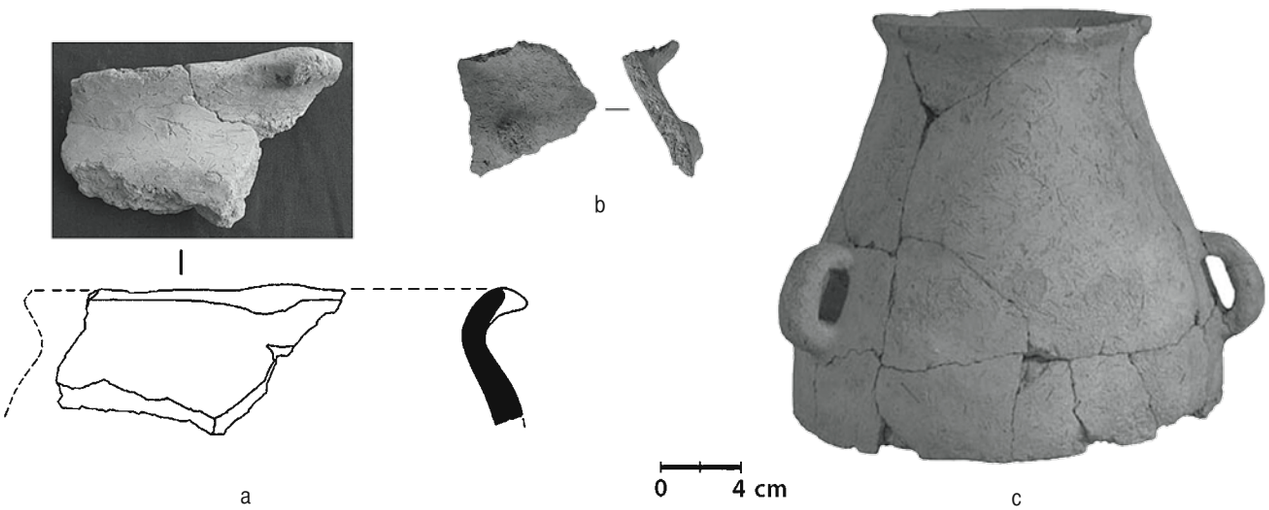


Figure 23.5. Lugs and handles: (*a*) pot with a low everted neck and a lug on the rim, (*b*) jar with bases of a loop handle on the shoulder, (*c*) three-handled jar

Among the painted sherds found so far in the Chalcolithic level of Godedzor, only a minority are related to the Ubaid tradition ("Ubaid-like painted pottery"), most being of regional fabrication, from the basin of Lake Urmia.

Ubaid-like Painted Pottery

Only a handful of sherds belong to this group. They are characterized by a very fine clay with extremely small grit or mica inclusions. The sections of the body sherds are usually very thin, and firing must have reached very high temperatures. External surfaces are white or cream slipped (2.5Y 8/3, 8/4, 8/6; 10YR 8/3), while the internal surfaces are plain and pink, light buff, or greenish. The paint is dark brown or black, and the motifs on the sherds recovered so far consist of small, superimposed black triangles (fig. 23.6).

All the fragments retrieved so far belong to small-sized jars. These triangular motifs find close analogies with those found in some Mesopotamian settlements of the Ubaid 3 period (e.g., Eridu IX; Safar, Mustafa, and Lloyd 1981), but appear also to be typical of the Late Ubaid decorative style of the second half of the fifth millennium. The

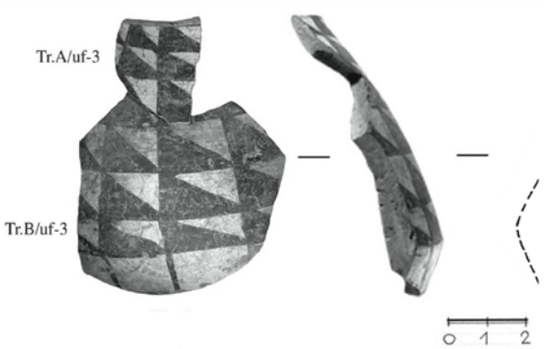


Figure 23.6. Ubaid-like painted ware

oi.uchicago.edu

closest parallels have been found at Tell Abada II–I (Jasim 1985: fig. 151:14), Tepe Gawra XII (Tobler 1950: pl. 139), and Tell Leilan VIb (Schwartz 1988: pl. 16e).

Northwest Iranian Painted Pottery

The northwest Iranian painted-pottery group is characterized by a whitish/yellowish slip (10YR 8/2, 8/3) on the external surfaces. Internal surfaces and cross sections tend to be pink or light yellow, and the core is always fully oxidized. This is fine, well-fired pottery, the clay being compact with mixed inclusions consisting of medium and fine chaff and fine grit and sometimes exclusively very fine grit. The paint is matte black or very dark brown, and the decorative motifs (fairly standardized) consist of bands of simple zigzag or wavy lines running horizontally along the neck and the body of the container, creating horizontal spaces filled with triangular, trapezoidal, and rectangular densely cross-hatched panels (fig. 23.7).

This painted pottery seems to be represented by only small and medium jars. The painted motifs and the technological features of this pottery group have close parallels with similar productions from the Chalcolithic sites of Lake Urmia (R. Biscione, pers. comm.) such as Pisdeli Tepe or the lowest strata of Tappeh Gijlar C (Dyson and Young 1960; Belgiorno, Biscione, and Pecorella 1984), before links developed between this region and southeast Turkey as demonstrated in the upper strata of Gijlar C and level M of Geoy Tepe (Voigt and Dyson 1992; Trufelli 1997; Helwing 2004).

The pottery of Pisdeli, of local fabrication, is clearly influenced by the latest Ubaid styles of northern Mesopotamia (Gawra XII–XIIA) and is part of the handmade, monochrome-painted, buff ware ceramic "co-tradition," which includes the central Zagros highlands and the Khuzistan (Susa A) phase (Henrickson 1985b). However, the Zagros highland region (including the Urmia Basin) was clearly not a monolithic "Ubaid-related" culture area throughout most of the fifth and the beginning of the fourth millennium B.C., but rather an environmentally and culturally diverse mosaic with its own strong local ceramic and presumably cultural traditions (Henrickson 1983: 397).

The ceramic stylistic similarity between the northern lowlands (Gawra) and highlands (Pisdeli) at the end of the Ubaid period may reflect Gawra's apparently active involvement in a long-distance mineral trade network; the northern route to the area of mineral resources in eastern Iran and Afghanistan crosses the northern Zagros south of Lake Urmia, near Pisdeli Tepe.

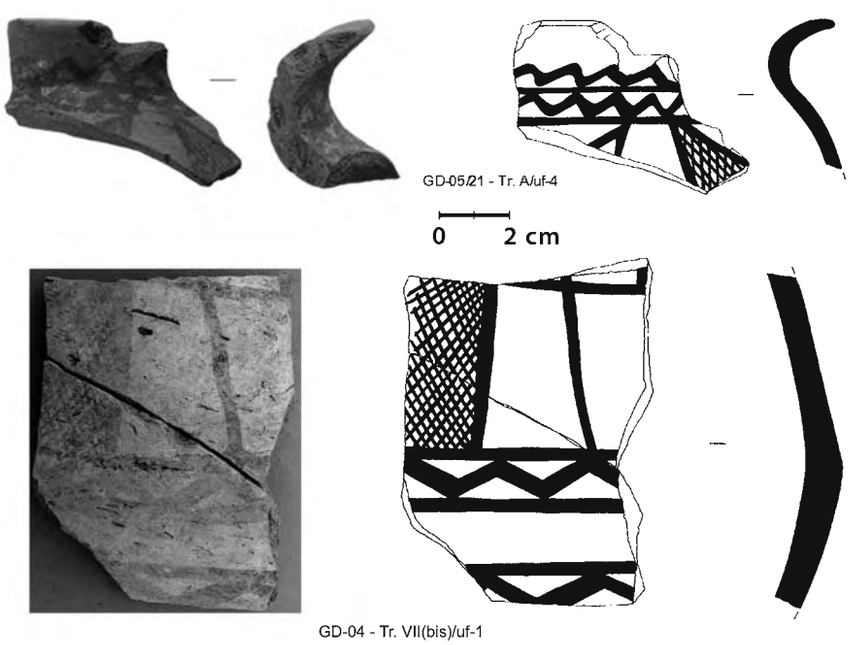


Figure 23.7. Northwest Iranian painted ware

oi.uchicago.edu

EXCHANGE NETWORKS

Most of the materials sought by the inhabitants of Tepe Gawra (lapis lazuli, chlorite, serpentine, hematite) are absent from the southern Caucasus. However, obsidian and copper are well attested in the southeast of the Lesser Caucasus, where the settlement of Godedzor is located.

COPPER

An abundance of copper ore is located not far from Godedzor in the southeast of the Lesser Caucasus, on either side of the Arax, in Armenia (Kafan, Agarak), in Nakhichevan (Vayhir, Ourabad), and in Iran (Ahar, Astamal, Zandabad). Other large deposits are located more to the north in Karabakh and in the Kura Valley (Kedabek). But it is very difficult to know when the exploitation of these different deposits began. The only prehistoric evidence of mining known in the whole of this region comes from Vayhir, in Nakhichevan, and dates to the third–second millennia B.C. (Schachner 2002).

In the lowlands that surround the southern end of the Lesser Caucasus, a few sites of the fifth millennium (Gargalartepesi and Chalagantepe in the steppes of Karabakh; Kültepe I in Nakhichevan) have produced copper objects, but none has produced slag or tools for casting. These appear in the first half of the fourth millennium, in particular at Leilatepe in the steppe of Karabakh, a settlement that in its architecture and objects clearly differs from the neighboring sites and reveals a comprehensive array of northern Syria Late Chalcholithic 3 materials ("pre-Contact phase"; Aliev and Narimanov 2001; Lombard and Chataigner 2004).

At Godedzor, copper objects are rare but present (awls), and no tool or slag provides evidence of local copper-working. It is the same in the basin of Lake Urmia, where the Chacolithic sites of the fifth millennium (Dalmatepe, Tepe Seavan, Pisdeli Tepe, etc.) produced no copper objects and where those of the fourth millennium (Tepe Gijlar, Geoy Tepe, Yanik Tepe, etc.) have only produced rare examples (Kroll 2002).

In the last phase of the Ubaid period, to which the settlement of Godedzor belongs, it appears that the exploitation of copper ores in the southeastern Lesser Caucasus had not yet taken place and could not have been one of the reasons for the establishment of the site.

OBSIDIAN

Almost all the lithic industry of Godedzor is in obsidian (98%), though there are some rare flint and quartzite pieces.

Local Exploitation

Most of the obsidian artifacts were worked from pebbles washed down by the Vorotan River and its tributaries from deposits near its source; many of these objects still have the "cortex" of pebbles rolled by the river, with a matte, rounded surface marked by repeated shocks (fig. 23.8f). The small nuclei from these pebbles permitted the attainment of flakes (fig. 23.8g), small blades (fig. 23.8b) then retouched as "knives" (fig. 23.8c), points, notched pieces (fig. 23.8e), end scrapers, and burins (fig. 23.8d). The lithic industry of Godedzor is characterized by the absence of a specific technique of debitage, a large percentage of artifacts having no particular evidence of having been worked, as well as a predominance of occasional flakes with retouch.

However, another group of objects (larger blades) was knapped from blocks of obsidian taken directly from the outcrops. This was also the case for three large conical nuclei (fig. 23.8a) found near a basalt rock with engraved representations. The presence of these nuclei, found together on the site, is surprising, all the more so since so far no tool has been identified as corresponding to removals from them. It is possible that they were intended for export.

oi.uchicago.edu

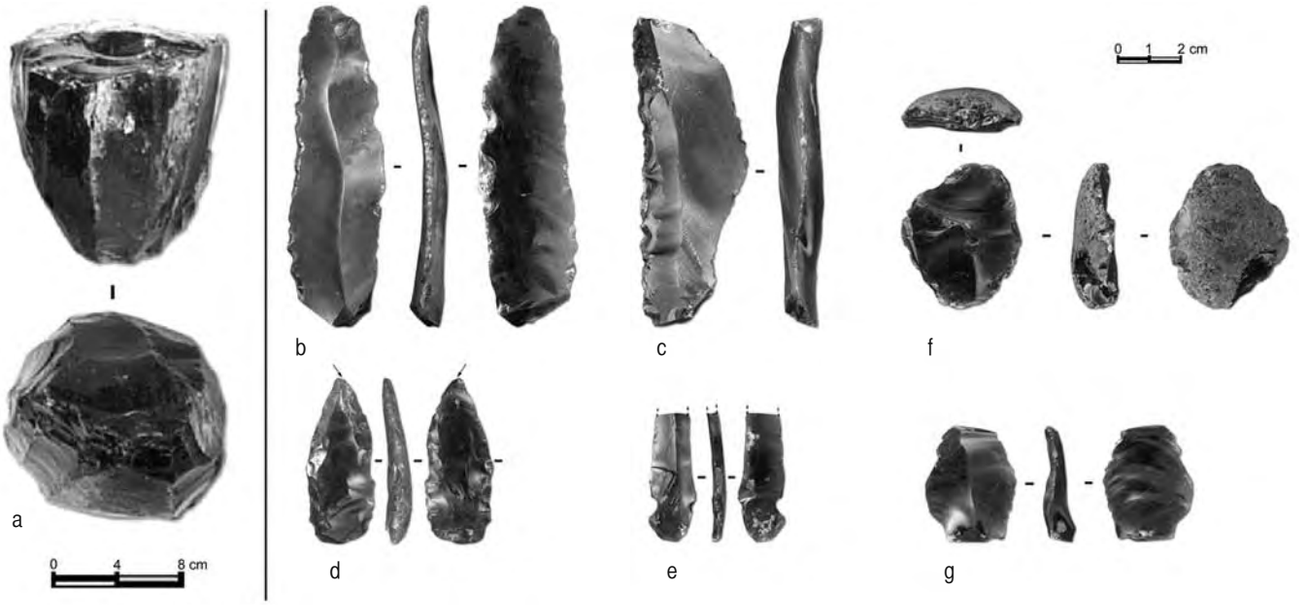


Figure 23.8. Chipped stone (obsidian): (*a*) large conical nucleus, (*b–c*) small blades, (*d*) burin, (*e*) notched piece, (*f*) pebble with cortex, (*g*) flake

Diffusion of Sevkar Obsidian

The chemical analyses carried out on the samples from the different sources of obsidian from Syunik (Satanakar, Sevkar, Bazenk) have shown that these flows have similar compositions, characterized in particular by low contents of barium, zirconium, and yttrium (Keller et al. 1996). This signature, which is clearly distinguished from those of other sources in Transcaucasia, was identified in artifacts from southeastern Armenia and the steppes of Azerbaijan (Badalyan, Chataigner, and Kohl 2004) and also in a small group of artifacts from the Near East, group "3c," identified by the laboratory at Oxford during pioneering analyses carried out in the 1960s (Renfrew, Dixon, and Cann 1966). The artifacts in this group all come from the basin of Lake Urmia, in northwestern Iran, and belong to contexts of the sixth millennium (Hajji Firuz) or the fifth–fourth millennia (Kushali Tepe, Pisdeli phase; Yanik Tepe, Late Chalcolithic).

The location of source 3c was then unknown, and Voigt (1983: 222) emphasized "the gross size (and therefore the weight) of the individual pieces of obsidian recovered from Yanic Neolithic contexts," of which the clear/striated material is very similar to that of Hajji Firuz, which suggests that this source probably lies east of Lake Urmia (Mount Sahand or Mount Savalan). However, a survey carried out in 1999 in northwestern Iran, in the mountains of Savalan and Sahend and in the region situated southeast of Mianeh (Agh Kend), enabled us to take samples of a rock that is geologically obsidian because it consists of a vitreous matrix of more than 70 percent, but includes a high proportion of crystallized minerals (25 to 30%), which makes it unsuitable for knapping.

Otherwise, the work carried out in the 1990s by M. J. Blackman (NIST laboratory, USA) and J. Keller (Freiburg, Germany), to characterize geochemically the obsidian sources of Transcaucasia, have shown that the deposits of Syunik (and especially Sevkar) are the most probable sources for the obsidian of group 3c (Keller and Seifried 1990: 84; Badalyan, Kikodze, and Kohl 1994: 91; Blackman et al. 1998).

The obsidian of Sevkar thus had a very limited diffusion toward the northern Near East, because it is not known outside the basin of Lake Urmia. Moreover, in this region, the quantity of 3c obsidian appears to decrease rapidly over time. According to the rare chemical analyses carried out (table 23.1), from the Hajji Firuz phase onward, the obsidian of the region of Lake Van is also present: groups 3a/3b (Meydan Dağ/Tendurek) and 4c (Nemrut Dağ). This obsidian from the Van region is present in the Dalma phase (first half of the fifth millennium) and remains clearly predominant in the Pisdeli and Late Chalcolithic phases.

oi.uchicago.edu

Table 23.1. Occurrence of obsidian groups

Site	*Cultural Phase*	*Group 3a/3b*	*Group 3c*	*Group 4c*	*Renfrew and Dixon 1976: 140–41*	*Voigt 1983*
Hajji Firuz	Hajji Firuz		3	×	nos. 181–83	p. 222
Yanik Tepe	Hajji Firuz		×		—	p. 222
Tamar Tepe	Hajji Firuz	1			no. 391	
Shatanabad	Dalma	2			nos. 395–96	
Dalma Tepe	Dalma	1		1	nos. 397–98	
Tabia Tepe	Dalma	2			nos. 393–94	
Kushali Tepe	Pisdeli	1	1		nos. 387–88	
Pisdeli Tepe	Pisdeli	3		2	nos. 204, 326–27	
Yanik Tepe	Late Chalcolithic	2	2		nos. 45, 86, 195–96	

A GIS study[2] of the circulation of obsidian in Transcaucasia (Barge and Chataigner 2003), to better understand the impact of relief and of distance on access to the sources of obsidian from the villages, has enabled the creation of a model for the most likely routes between the banks of Lake Urmia and the sources of the Sevkar, and to evaluate the time necessary to complete them: these routes go up the valley of the Nakhichevan River, following exactly the road that passes near Godedzor; they enable access to the obsidian deposits in 60 to 70 hours by foot, which is about 8 to 10 days. From Godedzor, only one day is necessary to reach the deposits.

The diffusion of the Sevkar obsidian beyond Transcaucasia is thus limited to the basin of Lake Urmia. This clearly indicates that this material was not integrated into the trade networks that crisscrossed northern Mesopotamia and enabled the Lake Van obsidian to be widely diffused (Cauvin and Chataigner 1998). However, the consistent diffusion of obsidian 3c between the sixth and fourth millennia suggests that the populations established in the basin of Lake Urmia had special links with those of the Vorotan Valley, that is, that the latter either "delivered" this material, or that they themselves ensured all or part of the journey. The relief of the high plateaus where the deposits are located is very mild and presents no difficulties for herds of oxen or sheep, which are still today moved seasonally in summer to these high pastures

PRACTICAL MEANS OF INTERACTION: SPECIALIZATION AND MOBILITY

The site of Godedzor does not appear to be a sedentary or continuously occupied settlement, and the mobile way of life of its population would have been the consequence of a subsistence strategy based on herding. This evidence for the development of pastoralism in northwestern Iran around the end of the fifth millennium is part of a wider phenomenon that concerns a large part of the Zagros. The hypothesis of specialization and mobility of the population of Godedzor is supported by several arguments.

LOCATION, ALTITUDE, SCARCITY OF THE ARCHITECTURAL EVIDENCE

Godedzor is situated at 1,800 m above sea level, on the upper terrace of the Vorotan, in a steppe environment favorable for extensive herding. This region is covered by a thick layer of snow from November to March (fig. 23.1). The village was probably not occupied during this period. The ethnographic sources (Mkrtumyan 1974) indicate the

[2] Functions "cost-weighted distance analysis" and "least-cost path analysis," ArcGIS (ESRI).

oi.uchicago.edu

great difficulty that the populations of this region still had at the beginning of the twentieth century to ensure the survival of their herds during the long winters. It is also possible that a part of the population of Godedzor stayed on the site through the winter, while most of the herd descended to their winter pastures in the lowlands.

There are very few architectural remains: the only traces of habitation, which belong to the upper horizon of the Chalcolithic layer, consist of vestiges of circular walls with only one course of stones.

COMPOSITION OF THE HERD

The faunal remains from Godedzor evaluated up to now are dominated by the bones of domestic ruminants, reaching 65 percent of about 3,100 identified specimens. The remains of the small domestic ruminants attain about two-thirds of the identified sample and, although less than one-fifth of their bones were well enough preserved for species identification, it is worth mentioning that almost all of them are from sheep. Only five bones were attributed to the domestic goat, and the domestic pig is only identified with three bone fragments. This is important with regard to mobility of the herds. In flat terrain goats are quite slow, and mobile pastoralists usually concentrate on raising sheep, keeping only some goats as flock leaders (Henrickson 1985a: 16). Pigs are generally difficult to be directed and kept together.

Cattle were most important as meat producers, providing almost 40 percent of the total weight of the identified specimens. However, meat production may not have been the only purpose of their presence. In cattle, out of sixteen first phalanges, three show indications that the animals were used for labor. Among the second phalanges, this is a ratio of one in fourteen. In addition, a pathologic cattle vertebra was found (Tomé 2005), which might also be caused by using the animal for traction or for loading. As more than half of the cattle bones are from at least subadult animals, milk and labor may in fact have been the main purpose of cattle husbandry for the ancient inhabitants of Godedzor.

Without doubt, cattle and sheep would have been most useful within a herding system based on transhumance, and cattle would have been used for transportation of heavy loads, as the deformed vertebra suggests.

LIMITED ROLE OF AGRICULTURE

Appreciable quantities of naked six-rowed barley (*Hordeum vulgare*) and naked wheat (*Triticum aestivum*) were found at Godedzor, but legumes (*Lens culinaris*, *Pisum sativum*) are surprisingly rare. The scarcity of heavy-duty tools (grinding slabs and pestles) is also noticeable. This can be explained by the limited role of agriculture at Godedzor. The cereals could have been acquired partly from farmers who were settled along the migration route, in exchange for the shepherds' products (milk, cheese, meat, wool, textiles, skins). Small-scale cultivation in the summer pasture lands is attested among the nomadic pastoralists of the Central Zagros (Henrickson 1985a).

OBSIDIAN EXCHANGE

Three large obsidian nuclei were found grouped together on the site ready for later use, probably in the Lake Urmia Basin (wintering region), as the analyses of provenance indicate the exportation of obsidian from Sevkar toward this region. Note that this material does not seem to have been a product expressly sought by the inhabitants of Godedzor for using in trade, because it did not diffuse beyond the basin of Lake Urmia. Obsidian appears to have been a byproduct of the pastoral lifestyle. The high plateau where Godedzor is situated lies near large obsidian deposits, but only a limited quantity (limited in particular by the weight of the material and the fact that the pack or draft animals would have been already heavily loaded with tents and belongings) could have been brought down for personal use or for local trade.

OTHER FACTORS CHARACTERISTIC OF NOMADIC CAMPSITES

To these elements, which suggest the mobility of the population that lived at Godedzor, may be added the features that, according to Abdi (2003: 406–07), are characteristic of nomadic campsites:

oi.uchicago.edu

- the establishment of the village along a migration route, as the village looks over the Vorotan River near where it is forded by the only route crossing this part of the Lesser Caucasus, which leads to the south and the Arax Valley;
- a repetitive seasonal occupation, suggested by the thickness of the Chalcolithic level, which despite the absence of architectural remains is nearly 1 m in depth (without reaching virgin soil) and by the enormous quantity of material, mainly pottery, which it contains;
- a self-sufficient household, indicated by diversification in the methods of acquiring food (herding, agriculture, and hunting) as well as by domestic production.

Hunting played an important role. *Cervus elaphus*, *Bos primigenius*, and *Bison bison* contributed about 25 percent of the animal bone weight. Wild boar (*Sus scrofa*), wild sheep (*Ovis orientalis*), wild goat (*Capra aegagrus*), and the onager (*Equus hemionus*) were other hunted ungulates. The presence of large wild carnivores — bear (*Ursus arctos*), lion (*Panthera leo*), and leopard (*Panthera pardus*) — might be connected, in that these predator species were hunted and killed for the protection of the domestic animals. The diversity of the environment (forest, steppe, mountain) frequented by these wild animals could correspond to the number of different ecological niches crossed (and exploited) during the seasonal movements of the group.

Domestic production was related to the exploitation of secondary products of the herd:

- wool: the main working tools are spindle whorls and other bone tools (awls, pins, combs), which suggests that wool processing and textile production were among the main activities carried out in situ;
- milk and derived products: possibly the three-handled pot was used for making butter or yogurt.

COMPARISON WITH TRANSCAUCASIAN CULTURES

In Transcaucasia, the society represented at Godedzor differs in every way from those that developed in the basins of the Arax and the Kura (cultures of Aratashen and Shulaveri-Shomutepe) in the sixth to the beginning of the fifth millennium B.C. These were characterized, in particular, by architecture in pisé or mudbrick and agriculture that was highly developed in quantity and variety (*Triticum monococcum*, *Tr. dicoccum*, *Tr. aestivum/durum*, *Tr. sphaerococcum*, *Tr. spelta*, *Avena sativa*, *Panicum miliaceum*; Lisitsyna and Prischepenko 1977; Chataigner 1995).

The Sioni complex, which succeeded the Aratashen and Shulaveri-Shomutepe cultures in the first half of the fifth millennium, is also indicative of a development toward a pastoral way of life: near-absence of constructed architecture, post holes indicative of light constructions, circular ditches considered to be enclosures for livestock (Varazashvili 1992). The pottery, however, is very different from that of Godedzor, as much in the technique (mineral temper is preponderant) as in the shapes or decoration (notches on the rim, rows of perforations or protuberances). This is why the pottery assemblage at Godedzor, which consists of coarse chaff-tempered ware and fine pottery with painted decoration, appears to be exogenous. It is probable that the painted pottery would have been brought from home, while the coarse pottery was made in situ; but both wares belong to the same cultural facies. The fact that the whole pottery assemblage moved would be another proof of mobility.

DEVELOPMENT OF PASTORALISM AT THE END OF THE FIFTH MILLENNIUM B.C.

Nomadism and mobility were a local traditional behavior of the Zagros population from the Pre-Pottery Neolithic onward, but this phenomenon expanded abruptly at about the end of the fifth millennium.

EARLY PASTORALISM (PRE-POTTERY NEOLITHIC)

The Zagros Mountains are generally considered to be one of several regions where nomadic pastoralism first emerged. The central part of these mountains and the Khuzistan Steppe have yielded a few Neolithic sites (Ganj

oi.uchicago.edu

Dareh, Tepe Guran, Sarab, Tepe Tula'i), whose earliest levels of occupation (belonging to the eighth or seventh millennium B.C.) are described as the semi-permanent or seasonal campsites of herders (Henrickson 1985a: 25–26; Hole 1987: 47; Bernbeck 1992; Cribb 1991: 216–18; Abdi 2003: 397, 409). The peripheral location of these sites — which makes them unsuitable for agricultural activities but appropriate for pastoral exploits (Abdi 2003: 409) — the absence of houses, along with a preponderance of sheep and goat bones are the main lines of evidence that suggest an economy based on pastoralism, either transhumant or village based (Hole 1987; Bernbeck 1992).

True agricultural villages also appear in the uplands of the Zagros at about the same time (eighth millennium B.C.), as exemplified by Tepe Abdul Hosein, a village with architecture and ground-stone artifacts (including mortars set in mud stands), located at 1,600 m above sea level in a mountain valley of Luristan (Hole 1987: 49). Sedentism gradually expanded in these mountains by the Late Neolithic and Early Chalcolithic periods. The number of villages increased substantially at the end of the Early Chalcolithic period, reaching its peak at the middle of the fifth millennium ("Early Middle Chalcolithic period," about 4700–4350 B.C.; Henrickson 1985a; Abdi et al. 2002; Abdi 2003).

EXPANSION OF PASTORALISM (MIDDLE CHALCOLITHIC)

In the late fifth millennium, the trend was abruptly reversed, and the number of permanent settlements dropped precipitously in favor of temporary campsites, perhaps as a result of a decline of the agricultural regime. The necessity of increasing mobility to gain access to pastures led to a shift from sedentism to nomadism, and to a pastoral mode of subsistence based on a new social organization revolving around a newly established nomadic identity (Abdi 2003: 397–98). Thus, mobile pastoralism began to be adopted on a wide scale in the Zagros highlands during the latter part of the Middle Chalcolithic period (Henrickson 1985a: 27–33; Abdi 2003: 423–25).

This hypothesis of mobility at the end of the fifth millennium B.C. ties in with the observations concerning the south of the Lake Urmia Basin (Helwing 2005). In the Ushnu-Solduz Valley, which extends to the south of Lake Urmia, there is clear evidence that, at some point around 4000 B.C., many and perhaps all of the villages scattered across the valley floor were abandoned. The area was probably occupied by nomadic pastoralists, as this valley provides excellent resources for herders (Danti, Voigt, and Dyson 2004).

According to Henrickson (1985a: 39–41), the growth of mobile pastoralism in the Zagros highlands was the result of three intertwined processes that occurred during the second half of the Chalcolithic era: population growth, a climatic shift (cooler and wetter following 4600 B.C.), and the economic interest of the emerging lowland polities in highland resources. The general deterioration of the climate at the end of the Middle Chalcolithic period, accompanied by overgrazing, is also emphasized by Abdi (2003), who considers it likely that more and more people turned then to mobile pastoralism as a viable subsistence strategy.

CONCLUSION

The Ubaid social and cultural phenomenon has been defined as the first instance of a homogeneous cultural area, despite large regional variability (Frangipane 2001). This phenomenon may have been related to the expansion of political and economic relations with (and influences from) southern Mesopotamian settlements during the Ubaid 3 and Ubaid 4 periods, in coincidence with the emergence of power groups that established forms of control and competition for local and exotic resources (but see, e.g., Karsgaard this volume, for an alternative perspective on the emergence of Ubaid material culture).

With the archaeological data available at present, it is possible to hypothesize the existence of complex societies from the end of the fifth millennium, when processeses of social stratification and specialization of production were slowly taking place through unequal access to and manipulation of material and ideological resources (Rothman 2001; Akkermans and Schwartz 2003). This is clear not only in the Syrian and Mesopotamian settlements, but also in the more peripheral areas of eastern Anatolia (Değirmentepe) and possibly also in northern Iran (Helwing 2005). It is also at this time that the long-distance relations between the Mesopotamian lowlands and the surrounding regions of the mountains and highlands, from the Taurus to the Zagros, became more consolidated and continuous than before.

The pottery production of Godedzor fits well into this picture of growing interregional relationships and enlarged cultural horizons. The chaff-tempered production reflects similar technologies that were widespread in the

oi.uchicago.edu

entire Syro-Mesopotamian and eastern Anatolian region. But while the introduction of these new techniques in these areas could have been related to shifts toward mass production and cost reduction, their use in the settlements of the more peripheral regions may have been related to the needs of the local populations. In the case of Godedzor, the chaff-tempered pottery and its crude technological features may have been well adapted to the production of large amounts of very basic pottery shapes having a short period of use; the least amount of effort, time, and fuel was thus spent for low-cost (and low-value) vessels that were possibly abandoned at the end of the season.

The presence of the north Iranian painted pottery, which among the decorated ceramics is the most common group, and the evidence of mobility suggest that the origins of the communities who settled at Godedzor should be sought in the region of Lake Urmia. The few sherds of Ubaid-like pottery could have been transported by these groups from their places of origin to neighboring areas during seasonal migrations.

Godedzor probably represents one of the northernmost settlements discovered so far, which indicates a clear northern Ubaid-related ceramic horizon. Its ceramic assemblage helps us to define more precisely the northern borders of an area (Iranian Azerbaijan) culturally related to the Ubaid developments taking place in southern and northern Mesopotamia. The site was possibly located on the edges of a region that was within the interaction sphere of the Ubaid-related communities of northwest Iran. To the north, that is in the Lesser Caucasus and the Ararat Plain regions, the local communities were developing at a totally different and autonomous pace (Sioni complex). The borders were probably very fluid and elastic, and not linked to forms of territorial control, being shifting cultural boundaries related to the main activities (in this case specialized pastoralism) carried out by the communities from the Lake Urmia area in short- or medium-range interactions. Thus, these boundaries shifted according to the directions chosen by the local transhumant groups during the course of their seasonal movements.

ACKNOWLEDGMENTS

The archaeological mission CAUCASUS is directed by C. Chataigner and is financed by the French Ministry of Foreign Affairs. The excavation of Godedzor is directed by P. Avetisyan (Institute of Archeology of Yerevan) and is conducted with the collaboration of Irene Kalantaryan and Firdus Muradyan (Institute of Archeology of Yerevan). The study of the pottery is entrusted to Giulio Palumbi (Università, La Sapienza, Rome, Italy), the chipped stone to Boris Gasparyan (Gfoeller Foundation), the bone artifacts to Rosalia Cristidou (Archeorient, Lyon), the fauna to Hans-Peter Uerpmann (Tübingen, Germany) and Carine Tomé (Cepam, Valbonne), and the plant remains to Roman Hovsepyan (Institute of Botany, Yerevan) and George Willcox (Centre national de la recherche scientifique, Lyon).

BIBLIOGRAPHY

Abdi, Kamyar

2003 "The Early Development of Pastoralism in the Central Zagros Mountains." *Journal of World Prehistory* 17: 395–448.

Abdi, Kamyar; G. Nokandeh; A. Azadi; F. Biglari; S. Heydari; D. Farmani; A. Rezaii; and Marjan Mashkour

2002 "Tuwah Khoshekh: A Middle Chalcolithic Mobile Pastoralist Camp-Site in the Islamabad Plain, West-Central Zagros Mountains, Iran." *Iran* 40: 43–74.

Akkermans, Peter M. M. G., and Glenn M. Schwartz

2003 *The Archaeology of Syria: From Complex Hunter-gatherers to Early Urban Societies (c. 16,000–300 B.C.)*. Cambridge: Cambridge University Press.

Aliev, N., and I. Narimanov

2001 *The Culture of Northern Azerbaijan in the Late Chalcolithic*. Baku: Agridag. [in Russian]

Badalyan, R.; Christine Chataigner; and P. Kohl

2004 "Transcaucasian Obsidian: The Exploitation of the Sources and Their Distribution." In *A View from the Highlands: Archaeological Studies in Honour of Charles Burney*, edited by A. Sagona, pp. 437–65. Ancient Near Eastern Studies Supplement 12. Herent: Peeters.

oi.uchicago.edu

Badalyan, R.; Z. Kikodze; and P. Kohl

1994 "Neutronic Activation Analysis of Caucasian Obsidian: Sources and Models of Procurement and Distribution (Neolithic Period—Early Iron Age)." In *Izuchenie drevnikh kultur i tsivilizatsij*, edited by V. Masson, pp. 87–92. St. Petersburg. [in Russian]

Badalyan, R.; P. Lombard; Christine Chataigner; and P. Avetisyan

2004 "The Neolithic and Chalcolithic Phases in the Ararat Plain (Armenia): The View from Aratashen." In *A View from the Highlands: Archaeological Studies in Honour of Charles Burney*, edited by A. Sagona, 399–420. Ancient Near Eastern Studies Supplement 12. Herent: Peeters.

Barge, O., and Christine Chataigner

2003 "The Procurement of Obsidian: Factors Influencing the Choice of Deposits." *Journal of Non-crystalline Solids* 323: 172–79.

Belgiorno, M. R.; R. Biscione; and P. E. Pecorella

1984 "Il saggio e i materiali di Tappeh Gijlar." In *Tra lo Zagros e l'Urmia*, edited by P. E. Pecorella and M. Salvini, pp. 241–99. Ricerche storiche ed archeologiche nell'Azerbaigian Iraniano. Rome: Edizioni dell'Ateneo.

Bernbeck, Reinhard

1992 "Migratory Patterns in Early Nomadism: A Reconsideration of Tepe Tula'i." *Paléorient* 18: 77–88.

Blackman, M. J.; R. Badaljan; Z. Kikodze; and P. Kohl

1998 "Chemical Characterization of Caucasian Geological Obsidian Sources." In *L'obsidienne au Proche et Moyen Orient: Du volcan à l'outil*, edited by M.-C. Cauvin, A. Gourgaud, B. Gratuze, N. Arnaud, G. Poupeau, J.-L. Poidevin, and C. Chataigner, pp. 205–31. British Archaeological Reports, International Series 738. Oxford: Archaeopress.

Cauvin, Marie-Claire, and Christine Chataigner

1998 "Distribution de l′obsidienne dans les sites archéologiques du Proche et Moyen Orient." In *L'obsidienne au Proche et Moyen Orient: Du volcan à l'outil*, edited by M.-C. Cauvin, A. Gourgaud, B. Gratuze, N. Arnaud, G. Poupeau, J.-L. Poidevin, and C. Chataigner, pp. 325–50. British Archaeological Reports, International Series 738. Oxford: Archaeopress.

Chataigner, Christine

1995 *La Transcaucasie au Néolithique et au Chalcolithique*. British Archaeological Reports, International Series 624. Oxford: Tempus Reparatum.

Cribb, Roger

1991 *Nomads in Archaeology*. New Studies in Archaeology. Cambridge: Cambridge University Press.

Danti, M. D.; Mary M. Voigt; and R. H. Dyson

2004 "The Search for the Late Chalcolithic/Early Bronze Age Transition in the Ushnu-Solduz Valley, Iran." In *A View from the Highlands: Archaeological Studies in Honour of Charles Burney*, edited by A. Sagona, pp. 583–616. Ancient Near Eastern Studies Supplement 12. Herent: Peeters.

Dyson, R. H., and T. Cuyler Young, Jr.

1960 "The Solduz Valley, Iran: Pisdeli Tepe." *Antiquity* 34: 19–28.

Frangipane, Marcella

2001 "Centralization Processes in Greater Mesopotamia: Uruk 'Expansion' as the Climax of Systemic Interactions among Areas of the Greater Mesopotamian Region." In *Uruk Mesopotamia and Its Neighbors: Cross-cultural Interactions in the Era of State Formation*, edited by M. S. Rothman, pp. 307–48. Santa Fe: School of American Research Press.

Hamlin, C.

1975 "Dalma Tepe." *Iran* 13: 111–28.

Helwing, Barbara

2004 "The Late Chalcolithic Period in the Northern Zagros: A Reappraisal of the Current Status of Research." In *Proceedings of the International Symposium on Iranian Archaeology: Northwestern Region*, edited by M. Azarnoush, pp. 11–24. Tehran: Iranian Center for Archaeological Research.

oi.uchicago.edu

2005 "Early Complexity in Highland Iran: Recent Archaeological Research into the Chalcolithic of Iran." *Tüba-Ar* 8: 39–60.

Henrickson, Elizabeth F.

1983 Ceramic Styles and Cultural Interaction in the Early and Middle Chalcolithic of the Central Zagros, Iran. Ph.D. Dissertation, University of Toronto. Ann Arbor: University Microfilms International.

1985a "The Early Development of Pastoralism in the Central Zagros Highlands (Luristan)." *Iranica Antiqua* 20: 1–42.

1985b "An Updated Chronology of the Early and Middle Chalcolithic of the Central Zagros Highlands, Western Iran." *Iran* 23: 63–108.

1989 "Ceramic Evidence for Cultural Interaction between the 'Ubaid Tradition and the Central Zagros Highlands, Western Iran." In *Upon this Foundation: The 'Ubaid Reconsidered* (Proceedings from the 'Ubaid Symposium, Elsinore, May 30th–June 1st, 1988), edited by E. F. Henrickson and I. Thuesen, pp. 369–99. Carsten Niebuhr Institute of Ancient Near Eastern Studies Publications 10. Copenhagen: Museum Tusculanum Press.

Hole, Frank

1987 "Archaeology of the Village Period." In *The Archaeology of Western Iran: Settlement and Society from Prehistory to the Islamic Conquest*, edited by F. Hole, pp. 29–78. Smithsonian Series in Archaeological Inquiry. Washington, D.C.: Smithsonian Institution Press.

Jasim, Sabah A.

1985 *The Ubaid Period in Iraq*. Oxford: British Archaeological Reports, International Series 267. Oxford: British Archaeological Reports.

Keller, J.; R. Djerbashian; S. Karapetian; E. Pernicka; and V. Nasedkin

1996 "Armenian and Caucasian Obsidian Occurrences and Sources for the Neolithic Trade: Volcanological Setting and Chemical Characteristics." In *Archaeometry 94: Proceedings of the 29th Symposium on Archaeometry*, edited by S. Demirci, A. M. Özer and G. Summers, pp. 69–86. Ankara: Tübitak.

Keller, J., and C. Seifried

1990 "The Present Status of Obsidian Source Identification in Anatolia and the Near East." In *Volcanologie et Archéologie*, edited by C. Albore Livadie and F. Wideman, pp. 58–87. Pact 25. Strasbourg: Conseil de l'Europe.

Kiguradze, T.

2000 "The Chalcolithic Early Bronze Age Transition in the Eastern Caucasus." In *Chronologies des pays du Caucase et de l'Euphrate aux IV^{e}–III^{e} millénaires*, edited by C. Marro and H. Hauptmann, pp. 321–28. Paris: de Boccard.

Kiguradze, T., and A. Sagona

2003 "On the Origins of the Kura-Araxes Cultural Complex." In *Archaeology in the Borderlands: Investigations in Caucasia and Beyond*, edited by A. Smith and K. Rubinson, pp. 38–94. Los Angeles: Cotsen Institute of Archaeology.

Kroll, Stephan E.

2002 "Metalle und Metallurgie in Nordwest-Iran und Armenien im Chalkolithikum und in der Frühen Bronzezeit." In *Anatolian Metal* II, edited by Ü. Yalçin, pp. 131–35. Der Anschnitt 15. Bochum: Deutsches Bergbau-Museum.

Lisitsyna, G. N., and L. V. Prischepenko

1977 *Palaeoethnobotanical Finds in the Caucasus and the Near East*. Moscow: Nauka. [In Russian]

Lombard, P., and Christine Chataigner

2004 "Le Néolithique et le Chalcolithique en Transcaucasie: L'exemple des bassins de la Kura et de l'Araxe." In *Aux marges des grands foyers du Néolithique: Périphéries débitrices ou créatrices?,* edited by J. Guilaine, pp. 61–84. Paris: Errance.

Mkrtumyan, Yu. I.

1974 "Types of Herding in Eastern Armenia." *Ethnography and Folklore of Armenia* 6: 7–92. Yerevan. [In Russian]

oi.uchicago.edu

Narimanov, I. G.
1987 *The Culture of the Earliest Farmers and Herders in Azerbaijan: The Chalcolithic Period 6th–4th Millennium B.C*. Baku: Elm. [In Russian]

Renfrew, Colin, and J. E. Dixon
1976 "Obsidian in Western Asia: A Review." In *Problems in Economic and Social Archaeology*, edited by G. de Sieveking, I. Longworth, and K. Wilson, pp. 137–50. London: Duckworth.

Renfrew, Colin; J. E. Dixon; and J. R. Cann
1966 "Obsidian and Early Cultural Contact in the Near East." *Proceedings of the Prehistoric Society* 32: 30–72.

Rothman, Mitchell S.
2001 "The Tigris Piedmont, Eastern Jazira, and Highland Western Iran in the Fourth Millennium B.C." In *Uruk Mesopotamia and Its Neighbors: Cross-cultural Interactions in the Era of State Formation*, edited by M. S. Rothman, pp. 349–401. Santa Fe: School of American Research Press.

Rova, E.
1999–2000 "A Tentative Synchronization of the Local Late Chalcolithic Ceramic Horizons of Northern Syro-Mesopotamia." *Mesopotamia* 34/35: 175–201.

Safar, Fuad; Mohamed A. Mustafa; and Seton Lloyd
1981 *Eridu*. Baghdad: Ministry of Culture and Information.

Schachner, Andreas
2002 "Zur Entwicklung der Metallurgie im östlichen Transkaukasien (Azerbaycan und Nahçevan) während des 4. und 3. Jahrtausends v. Chr." In *Anatolian Metal* II, edited by Ü. Yalçin, pp. 115–30. Der Anschnitt 15. Bochum: Deutsches Bergbau-Museum.

Schwartz, Glenn M.
1988 *Aceramic Chronology from Tell Leilan: Operation 1*. New Haven and London: Yale University Press.

Stein, Gil J.
1994 "Economy, Ritual and Power in 'Ubaid Mesopotamia." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by G. J. Stein and M. S. Rothman, pp. 35–46. Monographs in World Archaeology 18. Madison: Prehistory Press.

Tobler, Arthur J.
1950 *Excavations at Tepe Gawra*, Volume 2: *Levels IX–XX*. Publications of the Baghdad School, Excavations 1. Philadelphia: University of Pennsylvania Press.

Tomé, C.
2005 "Étude de la faune de Godedzor." In *Rapport 2005 de la mission Caucase*, edited by C. Chataigner, pp. 121–30. Lyon: Centre National de la Recherche Scientifique.

Trufelli, F.
1997 "Ceramic Correlations and Cultural Relations in IVth Millennium Eastern Anatolia and Syro-Mesopotamia." *Studi Micenei ed Egeo Anatolici* 39: 5–33.

Varazashvili, V.
1992 *The Early Agricultural Culture of the Iori-Alazani Basin*. Tbilisi: Metsniereba. [In Russian]

Voigt, Mary M.
1983 *Hajji Firuz Tepe, Iran: The Neolithic Settlement*. University Museum Monograph 50. Philadelphia: University of Pennsylvania.

Voigt, Mary M., and R. H. Dyson
1992 "The Chronology of Iran, ca. 8000–2000 B.C." In *Chronologies in Old World Archaeology*, edited by R. Ehrich, Volume 1, pp. 122–78. Chicago: University of Chicago Press.