

EARLY STAGES  
IN THE EVOLUTION OF  
**MESOPOTAMIAN  
CIVILIZATION**

Soviet Excavations  
in Northern Iraq

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## MESOPOTAMIAN INTERACTION SPHERES

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The Concept of *Interaction Sphere* and Its Appropriateness in Mesopotamian History and Prehistory

The term *interaction sphere* entered archaeological literature in 1964 in J. R. Caldwell's description of the Hopewell interaction sphere of eastern North America. For Caldwell, the specific problem was how to describe nominally distinct Middle Woodland assemblages (ca. 250 B.C.—A.D. 250) that also possessed significant similarities in the material residues of mortuary practices. He invented the term *interaction sphere* to denote that there were social, ideological, and trade connections among populations that shared thereby a restricted corpus of material cultural—in the Hopewell case of pipes, figurines, copper axes—namely, those objects associated with the interment of the honored dead. Struever and Houart (1972) observed that such characteristic Hopewell items not only reflected membership in a "burial cult," but also denoted the location of "transaction centers" through which the goods moved intraregionally.

The interaction sphere concept, as formulated by Caldwell, describes the condition in which those otherwise locally "autonomous" societies were also connected on a regional basis—that is, local social systems could be identified by distinctive settlement patterns in specific ecological or geographic circum-

stances, the practice of appropriate subsistence techniques, and the maintenance and reproduction of historically determined cultural ways and associated material culture. Nevertheless, the circulation of certain goods "bounded" these local systems within a large, regional or super-regional area. In order to perpetuate the flow of these goods, furthermore, a common code of values and beliefs, manifested in a shared corpus of symbols, was invented to facilitate the social interaction needed to exchange the goods. This common code, if not conceived by elites, soon became controlled by them. For Caldwell, thus, the formation of an interaction sphere had evolutionary implications: it connected distinct peoples above the local ties of kinship; it promoted the adoption of innovations and ideas among different people; and it increased the status of local elites and so formed the foundation from which more stratified societies could emerge (see Schortman and Urban 1987 for an assessment of why and in what historical context Caldwell invented the term *interaction sphere*).

The problem of inferring the existence of interaction spheres that connect local societies was also addressed by David Clarke, who strongly asserted that "cultures" in prehistory

should not be confused with "anthropological" cultures (by which he meant local ethnolinguistic groups):

The anthropologist looks at aspects of the social system of cultures [while] archaeologists . . . look at the material system of the same cultures [and find that] . . . the systems are not the same yet neither are they unconnected. Serious dangers await those who transfer observations about the one class of system to the other and yet it is important that the coupling between the different systems and their attributes should be . . . made explicit. . . . The archaeological entities reflect realities as important as those recognized by . . . other disciplines. . . . [They] are equally real . . . and simply different. (1978, 61, 369)

An interaction sphere, therefore, is a useful term in prehistory since it implies that certain material features found over a large area reflect a set of cultural relations that transcend localized nests of institutions and distinct peoples embedded within it (see Willey 1991 for a review of the term *horizonal styles* in Mesoamerican and Andean archaeology that has much of the force of the concept of interaction spheres; and see below in this chapter for a discussion of Willey's essay).

Although this chapter will explore the utility of the 'interaction sphere' concept in the "later Neolithic" of Mesopotamia, especially since the data unearthed by the Soviet expedition allow new interpretations of the Has-suna, Samarra, and Halaf periods, I begin with a brief look at the nature of social interactions in historic Mesopotamia. As historians of early Mesopotamia are aware, there is no Mesopotamia at all in the political sense of the term (Yoffee 1988a). Instead of a single Mesopotamian state, one is wont to speak of Mesopotamian civilization, the set of cultural traditions that overarched the large number of independent political states and the many ethnic and linguistic groups in the land. I shall briefly delineate the traditions that facilitated interactions among these various groups and which, indeed, made Mesopotamia Mesopotamia.

These defining traditions of Mesopotamian history, of course, have their roots in Mesopotamian prehistory. In this chapter I use the concept of interaction sphere in order to delineate some major organizational boundaries in Mesopotamia and to explain their evolution. If the term interaction sphere is to escape a certain inherent fuzziness (imposed by the two common nouns), however, it must denote certain kinds of behavior but not others, and the marked behavior must be palpable, not merely abstractly logical.

In particular, interaction sphere does not denote the sort of interactions P. L. Kohl has discussed as a West Asian "world-system" (1978). Kohl, in emending Wallerstein's idea of *world-systems* (1987a, 1987b), has shown that local developments in third millennium Mesopotamia, such as the production of certain goods for export (especially textiles) and the attendant social stratification associated with such changes in these industries, can only be understood when placed in an inter-regional perspective of organized trade that goes far beyond any conceivable borders of Mesopotamia. Although, as Kohl argues, the system of long-distance economic exchange can affect important aspects of the internal social and political structure in all societies participating in the long-distance trade, interaction sphere must refer to a more compact geographical area and it must, at the same time, point to a more encompassing set of behaviors than is considered the subject of world-systems theory. World-systems are by definition so geographically enormous that the core institutions that differentiate one society from another cannot be determined by contacts effected through long-distance trade. An interaction sphere, by contrast, refers exactly to the systematic, consistent, and normative set of activities that link people in such a way that a significant part of their identities are defined by such interactions.

At the other end of the scale of things that interaction sphere does not denote is the behavior of ethnic groups (contrast Schortman and Urban 1987; Schortman 1988). In historic

Mesopotamian histories often have the urgency of a von Däniken script: after a long period in which little of consequence occurred, vast building schemes and imperial adventures were undertaken by great men who transformed their world. This sort of historian's myopia is, of course, matched by the prehistorian's tendency to fold his or her tent and steal away at the dawn of history (after Kohl 1978, 475), as if prehistoric institutions were utterly different from those in historic periods.

Two significant issues of Mesopotamian historical interaction bear on the prehistoric investigation in this chapter. The first is that Mesopotamia is divided into two distinct regional entities, Assyria and Babylonia. The second is that within each region numerous named social groups coexisted as organizational units.

The political autonomy of Assyria and Babylonia is clearly seen in the distinct trajectories of their collapse in the mid first millennium B. C. As is well known, the Assyrian state had transformed itself from its decentralized structure in the early and middle second millennium to a more highly nucleated government in the late second millennium.

Although this transformation occurred initially as a response against the hegemony of its neighbors (especially of the Hurrian state of Mitanni), in the first millennium Assyrian warrior kings came to dominate most of the territory from the Mediterranean to the Zagros Mountains. The policies of imperial expansion included disenfranchising the old-line Assyrian nobility in favor of new military officials and administrative bureaucracy, importing tens of thousands of foreign laborers who were employed on vast Assyrian estates, and founding new capitals that functioned as treasuries for the booty acquired by the Assyrian army (see Yoffee 1988a for references).

With the defeat of the Assyrian army by Medes and then by Babylonians (614–610 B. C.), the supply of foreign goods and services to the new Assyrian elite and Assyrian control of a largely non-Assyrian countryside ceased

Mesopotamia, for example, ethnic and regional boundaries have been studied by Brinkman (on Kassites and Hurrians 1981), Dosch and Deller (on Kassites 1981), Charpin (on Hurrians 1977), Kamp and Yoffee (on Amorites 1980), Eph'al (on Arabs, Egyptians, and Jews 1978) among many others. Whereas these studies of ethnicity demonstrate that membership in an ethnic group might prescribe certain behaviors, the interaction of the many and varied ethnic and linguistic groups in Mesopotamia can only be explained by a more encompassing theory of social organization.

### *Interaction Spheres in Mesopotamian History*

In this section I explore briefly (see Yoffee 1988a for a lengthier exposition) some salient historic cultural institutions that are "Mesopotamian" and consider certain mechanisms by which Mesopotamian culture is reproduced in historic periods. Although the discussion must be brief, this overview of selected Mesopotamian historic institutions is relevant, for it allows a certain structure to be imposed on the succeeding prehistoric investigation.

This historical lens on the past, however — if it has the virtue of not separating Mesopotamian evolutionary processes on the basis of one new data set (written documents) — also carries with it a certain theoretical liability: there is no necessity that the prehistoric past must constitute an unbroken cord to the historic present. That is, the process of change might result in dramatically new organizational forms from which an extrapolation backwards would represent a Procrustean bed in which the prehistoric past is condemned to resemble a form of the historic present. Nevertheless, this perspective from historic Mesopotamia does provide a correction to the historian's occasional view that prehistory is a long, largely incomprehensible, and immaterial backdrop to the events documented in cuneiform writing. Indeed,

abruptly. Furthermore, absence of previous Assyrian institutions of urban and rural leadership, which had been systematically supported by the neo-Assyrian military kings, prevented any reformulation of an Assyrian state. The collapse of Babylonia was not as precipitous as that of Assyria. Nevertheless, after the conquest by Cyrus the Great of Persia in 539 B.C., the rulers of Babylonia no longer thought of themselves as Babylonian, and no Babylonian state ever again emerged. Differing from the Assyrian case, however, Babylonian culture (literature, customs, and language) did not disappear with the collapse of the Babylonian state. Embedded in Achaemenid, Seleucid, and other political systems, however, Babylonian culture became reduced to one among many competing ideologies and linguistic choices and, no longer providing any selective advantage in political or economic life, eventually atrophied and died. The last document written in the cuneiform script in A.D. 75 may serve, in a suitably Mesopotamian way, to mark the end point of Babylonian civilization.

If Assyriologists are well aware of the differences between Assyria and Babylonia, however, they also know that there are aspects of a profound interregional cultural boundary that spanned them both. On the linguistic level, whereas Assyrian and Babylonian are dialects of Akkadian, a "Standard Babylonian" literary dialect was created in which both Assyrian and Babylonian hymns and epics were written.

Indeed, the model of Mesopotamian cultural unity can best be seen in "the preservation, transmission, and revision of whole bodies of texts — or what Oppenheim has aptly called 'the stream of tradition' — which were assembled from all parts of [Mesopotamia] and over many centuries" (Machinist 1985, 185).

These texts include, significantly, the corpus of god-lists, in which tutelary city-deities are grouped into a common pantheon and whose assembly is located in a Mesopotamian city — usually Nippur, later Babylon. P. B.

Machinist (whose argument this is) also notes that in the first millennium B.C., Assyrian relations with Babylonia not only dictated military intervention in Babylonian affairs, but also justified the removal of cultural treasures to Assyria. Machinist analyzes these actions as an Assyrian attempt to replace Babylon with Assyria as the center of Mesopotamian culture (Machinist 1976).

If Mesopotamian culture is thus separate, both as unit of analysis and as tangible reality, from Mesopotamian political systems, a few words must be devoted to how it was learned and transmitted and why it was of social importance to its members. This subject is of particular significance since, from the earliest historic records, Mesopotamia, both in its regions and within the earliest city-states, consisted of many ethnic groups whose number, if anything, did not diminish throughout the three thousand years of Mesopotamian historical documentation.

By ethnicity I specifically mean (see Kamp and Yoffee 1980; Yoffee 1989) a mode of social incorporation in complex societies in which a number of individuals see themselves as alike by reference to a common or fictitious ancestry and who are so regarded by others. That is, ethnic identity involves the maintenance of a set of ideas and symbols by which claims may be made to solidarity or opposition in intergroup or interpersonal relations. This "interactional approach" (Barth 1969) defines ethnicity, not on the basis of a list of traits, such as language, territorial contiguity, biological descent, ecological adaptation, or political organization, but solely on the basis of self-ascription and ascription by others.

This interactional approach to ethnicity also allows for the existence of more than one type of social and economic status within the single, ethnically bounded group, and this is the case in the Mesopotamian examples. Amorites, to cite one case (Kamp and Yoffee 1980), were nomads, villagers, urbanites, peasants, and mayors. They could be loyal subjects of the Ur III state and also "tribally" organized in the countryside and a threat to

## Prehistoric Mesopotamian Interaction Spheres

### *The Later Neolithic in Light of Recent Finds of the Soviet Expedition*

By the "later Neolithic" (that is, the Hassuna, Halaf, and Samarra periods) of Mesopotamia, as many studies have demonstrated, the economy of permanent villages was based on morphologically domesticated species of flora and fauna (see recent summaries by Harris 1989; Moore 1985; Oates 1973, 1980; Zohary 1989; Zohary and Hopf 1988). That is, by about 6000 B.C. (Aurenche, Evin, and Hours 1987), human beings had already intensified by existing technology the amount of labor required to maintain residential stability in and out of areas of naturally occurring and abundant cereal, animal, and lacustrine resources (Sherratt 1980a, 1980b; Bar-Yosef 1980; Bronk 1975). The sequence of sites from Nemrik (Kozłowski 1990a, 1990b), Qermez Dere (Watkins and Baird 1987), and Maghzaliyah (Bader, chapters 2 and 5 this volume) spans the late ninth through mid-seventh millennia and so now attests to a process of sedimentation and food production occurring much earlier than had been suspected only a few years ago. Furthermore, the sites of Sotro and Kültepe, according to Bader, connect the "earlier Neolithic" material cultures of Maghzaliyah, Jarmo, and Umm Dabaghiyah to the archaic phase of the Hassuna (but see Merpert, chapter 7 this volume and Bader's own distinctions among the material cultures of the "earlier Neolithic" in chapter 5 this volume).

The intensification of labor in these "early Neolithic" villages can be inferred from elaborated storage facilities, permanent architecture, use of prodigious amounts of plaster (see Kingery, Vandiver, and Prickett 1988), and from traces of the plants and animals being exploited. Furthermore, this process of intensification led to new divisions of labor in the production and distribution of resources and to a new concern for the transmission of property (see Yoffee 1988c for this latter inference;

the state because they were not under its control. After the collapse of Ur III (ca. 2000 B.C.), Amorites could compete successfully for political power (mainly with other Amorites) because of the variety of ethnic relationships that Amorites could mobilize, especially in the absence of a centralized opposition in city-states that had been subjects of the Ur III kings.

The history of Mesopotamia is replete with such examples of ethnic group behavior (see above cited articles for literature); ethnicity was a useful mechanism through which political interactions within and among city-states could be channeled. Furthermore, ethnic relationships, which transcended city-states and regions could not only accommodate, but also further the maintenance of overarching Mesopotamian cultural ideologies. Amorites and Kassites, having taken political power sequentially in Mesopotamia in the early and middle second millennium, used Mesopotamian cultural institutions (issued law-codes in the time-honored method [Yoffee 1988b], revived ancient languages, and patronized scribal schools to preserve and reinvigorate ancient literary forms [Lambert 1961]) precisely because, in doing so, they could legitimize their political gains. While maintaining aspects of their own ethnic orientations, they also were (or became) Mesopotamians.

To sum up this bird's-eye view of Mesopotamian historical interactions, it is seen that the major regional units of Assyria and Babylonia were participants in an overarching Mesopotamian civilization. Although a political ideology, for example, that depicted in the Sumerian King List (Michalowski 1983), existed to justify imperial aspirations of joining the regions, a unified Mesopotamian state never really existed. Within and beyond the city-states in Babylonia and Assyria, moreover, were the various ethnic groups, each with individual cultural identities, but which shared a common Mesopotamian culture. It is the task of the next section of this chapter to trace the prehistoric roots of this Mesopotamian culture.

for notions of broadly similar ways of life in these early villages, see Voigt 1985, 1986; Cauvin 1988; Hole 1984; Watkins 1990). These profound social and economic changes are reflected in the large size and diversified architecture, including fortifications (such as at Maghzaliyah), of Neolithic sites. These changes in social organization are here briefly followed through the Hassuna, Samarra, and Halaf phases of the "later Neolithic."

During this period trends towards further social and economic differentiation occur significantly through the medium of regional forms of interaction. Although the sites of the "later Neolithic" are scarcely larger than those of the "earlier Neolithic," it is the formation of new geographic scales of social and economic behavior that have evolutionary significance. These regional "interaction spheres" are then pursued through the subsequent organizational restructuring in the Ubaid period and political and demographic transition of the Uruk. The purpose of these few remarks, of course, is not to provide an in-depth account of evolutionary trends in Mesopotamia; but it is considered that certain aspects of the prehistoric material record constituted formative stages, and not simply in a chronological sense, in the development of Mesopotamian states and civilization.

The Hassuna, Samarra, and Halaf phases (for descriptions and dates see Mellaart 1975; Lloyd 1976; Nissen 1988; Porada 1965; Aurenche, Evin, and Hours 1987) were first known as, and are still basically typed with reference to decorated ceramic assemblages. At Tell Hassuna, the type site for the Hassuna phase, the stratigraphic profile of the ceramics (Lloyd and Safar 1945; Perkins 1949) indicates the following stylistic overlaps: Hassuna wares are the earliest, but are partly contemporary with Samarra wares, which are in turn earlier than, but partly contemporary with Halaf wares. At Yarim Tepe I, the most important Hassuna site in terms of the architectural elaboration and site structure (chapters 6 and 7 of this volume, Munchaev and Merpert 1981), the characteristic Has-

suna ceramics of the early levels are mixed with Samarra wares in the upper ones. The Halaf settlement of Yarim Tepe II, was founded upon a small Hassuna village, and the cemetery of Yarim Tepe II was placed on the top of the abandoned village of Yarim Tepe I (chapter 10 this volume).

Samarra wares are found in sites of central Mesopotamia (see J. Oates 1973, 1976, 1978, 1980 for summaries of the sites), the most important of which are Tell es-Sawwan and Choga Mami. Although the stratigraphy and plans of the former are difficult to unravel, the number of large buildings, the rich infant burials under impressive structures, and a possible fortification system all point to a socially and economically stratified society. At Choga Mami were found irrigation ditches prepared by exploiting the difference in altitude between two roughly parallel streams, and at Sawwan botanical remains imply that irrigation was being practiced (Heibæk 1964).

Joan Oates has written (1973) that the Samarra culture may be considered an adaptation to the needs of irrigation agriculture in central Mesopotamia. Hassuna, on the other hand, reflects an adaptation to the northern dry-farming zone. It is, of course, not implied that the decorated pots themselves, which form the basis for these "cultural" distinctions, were ecologically adaptive, but that the people living in each zone interacted more intensively with their neighbors than they did with those living in the other zone.

The distribution of Halaf ceramics, which overlap in time the Samarra wares but continue later than Samarra examples, barely reaches the Mesopotamian alluvial plain (see Fig. 14.1). Rather, Halaf pottery, often described as the finest prehistoric ware in Mesopotamia, is found from Lake Van in the north (and, in fact, Halaf ceramics are found in Transcaucasia according to P. L. Kohl), to the Mediterranean in the west, to beyond the Tigris in the east (Watson 1983). Remarkably, over this wide expanse, "Halaf [has been considered] one of the most homogenous prehistoric cultures anywhere in the world" (Le

Blanc and Watson 1973, 132; but see Watson 1983 for an assessment of local variations within other aspects of the Halaf assemblage, including *tholoi*, figurine styles, and stone "stamp seals").

Prior to the discovery of Yarim Tepe II, the single most important Halaf site was Arpachiyah (Mallowan and Cruikshank Rose 1935; Hijara 1978, 1980). In the center of the site, in level TT-6, stands the largest building exposed at Arpachiyah, the "potter's workshop." This structure was so named because of the amount and quality of Halaf polychrome ceramics that were stacked in several rooms. In connection with these pots were found flint and obsidian tools, red ochre and other pigments, painters' palettes, and bone implements for trimming and burnishing clay. Near the house were several kilns. Mallowan considered that this structure was a specialized activity location for the production of high-quality ceramics for the massive site of Nineveh, which presumably dominated Arpachiyah in the Halaf period but whose Halaf levels have only been sounded.

In addition to the potter's tools and the finished pots themselves, this large structure also contained turquoise and shell jewelry, stone vessels, and amulets that together seem to reflect the high status of the resident(s). These finds along with the house's central location and impressive size do not lead one to suppose that the resident was a simple craftsman. Rather, the house is presumably that of an elite (or elite group), someone involved in the production and distribution of high-quality Halaf ceramics.

The neutron-activation studies of Davidson and McKerrell (1976, 1980; Frankel 1979; Watkins and Campbell 1987) indicate that high-quality Halaf ceramics were produced in a limited number of centers and were circulated to the hinterlands of those centers (although Davidson and McKerrell's statistical significance level for similarity of ceramic composition among sites is not high [50%], thus calling into question this conclusion [Gil Stein, personal communication, from James

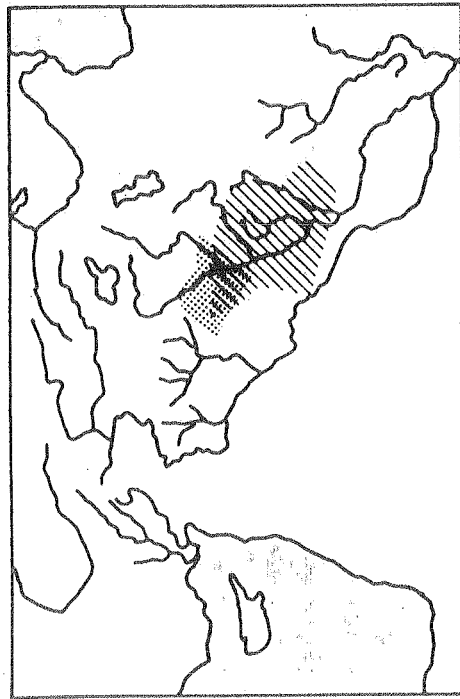
Blackman's communication to him]). The stylistic unity of the design motifs that, as shown in LeBlanc's investigation (1971), extends over the huge territory regarded as Halafian (Fig. 14.1) is thus the more remarkable.

One plausible interpretation that accounts for these data is that production and distribution of Halaf ceramics was "controlled" by emerging local elites who maintained regular networks of communication and were bound by particular sets of interests. This interpretation, which is borrowed from Flannery's hypothesis of exchange between elites in the Olmec and Oaxaca region of southern Mexico (Flannery 1968), has an economic rationale: in the Halaf, the circulation of Anatolian obsidian, copper, turquoise, and other materials was facilitated by a system of symbols that provided a shared "cultural" bond.

### Interaction Spheres

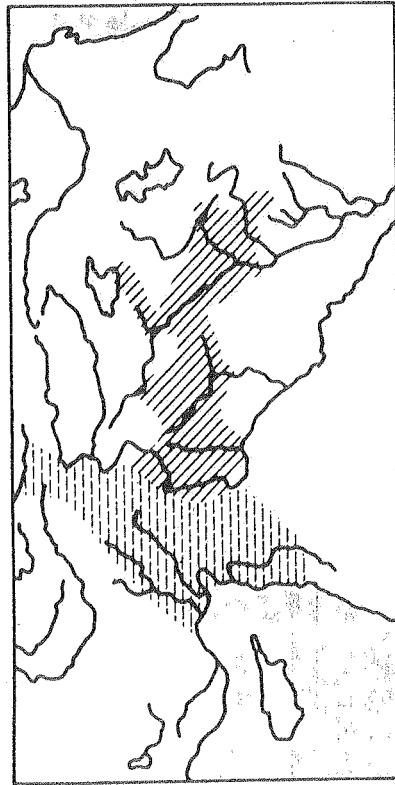
James Mellaart has tended to equate prehistoric Mesopotamian material cultures with distinct peoples, their customs, and even their languages (Mellaart 1975). According to Mellaart, Halafians were northerners, originally at home in central and eastern Anatolia, controllers of the supply of obsidian localized there. The extent of the Halaf is due to their southward migration from their Anatolian homeland. This view is supported by Munchaev and Merpert (1981), who point to the abandonment of Yarim Tepe I (a Hassuna site) and the founding of Yarim Tepe II (a Halaf site) as well as the establishment of a Halaf cemetery atop Yarim Tepe I. Furthermore, it is held in this theory of demographic or ethnic replacement that the rectangular house form of the Hassuna is supplanted by the round (*tholoi*) form of the Halaf. An alternative explanation for culture change in the "later Neolithic" is presented here.

Using the concept of interaction spheres, it is proposed that the Hassuna and Samarra may each be recognized as a geographically localized bundle of interactions that "united"



Hassuna

Samarra



Area of "true Halaf" influence

Area of Halaf influence with "local Halaf"

Figure 14.1 Extent of Halaf, Samarra, and Hassuna material culture. Top: Rough indication of Hassuna and Samarra "interaction spheres" (After Mellaart, *The Neolithic of the Near East*, 1975). Bottom: Rough indication of Halaf "interaction sphere" (After Mellaart, *Earliest Civilizations of the Near East*, 1965).

their regions. Each set of interactions, which included exchanges of goods and (presumably) marital partners, is discerned in the shared corpus of pottery motifs in each region; it is inferred that each of these regionally distinctive ceramic repertoires represent shared values and a shared history. When a Samarra site is found in Syria (Baghouz) or Samarra ware is found in northern Mesopotamia, the appropriate conclusion is, not that irrigation agriculture (as is identified in Samarra sites in central Mesopotamia) was imported to these regions, but that central Mesopotamians were (most likely) trading in those areas. In any case, "central Mesopotamia" is obviously not a sharply bounded geographic enclave, and movement of peoples between regions is perfectly expectable.

"Overlaps" in the ceramic stratigraphy between Hassuna and Samarra simply indicate communication between the regions. The Halaf, to the contrary, reflects neither an adaptation to a specific environment, an ethnolinguistic group (which seems precluded in that no documented group of people in West Asia sharing a common culture has ever exhibited the uniformity of behavior over the extent of territory in which Halaf is found), or a relatively tight geographic bundle of regional interactions. (Although this argument does not preclude northern influence into Mesopotamia, it rejects the interpretation that the "meaning" of Halaf is that a new group of people invaded and "displaced" an older one, after which the new group became displaced. In excavations at Tell Sabi Abyad, a Halaf site in northern Syria, the excavators report that "earlier Neolithic occupation levels immediately preceded" the occurrence of Halaf at the site. No gap in occupation is indicated, and Halaf at Sabi Abyad was apparently the result of a gradual and continuous local process of cultural change" [Akkermans and Le Mière 1992, 3]). Rather, the Halaf may be described as an interregional sphere of interaction. The uniformity of Halaf motifs coupled with the circulation of pottery from specialized production sites implies that local

elites were attempting to control the production not only of the pots but also of the important symbols — the metalinguistic code — that facilitated the exchange of goods over long distances and across many local ethnic boundaries.

To summarize the argument thus far, it is posited that two kinds of interactions characterize the later phase of the Neolithic in Mesopotamia. In the first, regional bundles of interaction account for the development of the material cultures we call Hassuna and Samarra, in north and middle Mesopotamia, respectively. In the second, a wide-scale, interregional exchange sphere can be inferred in the Halaf in which local elites sought to control the circulation of goods across vast geographical and social distances.

### The Formative Stages of Mesopotamian Historic Civilization

The Ubaid has been described as being the first and last unified material culture assemblage in Mesopotamia (e.g., Porada 1965; see Oates 1983, 1987; Jasim 1985, 1989). Both in the northern region and, for the first time, in the south similar ceramic types and, significantly, temple architecture (at the major sites of Gawra and Eridu) seem to reflect a cultural unity (described in authors from Perkins 1957 to Stein 1991). Not only is Ubaid found in the northern Mesopotamian plain and in southern Mesopotamia, but it is also present in Syria (Simpson 1988), in Iran (Henrickson and Thuesen, eds. 1989), and in a number of sites along the eastern Arabian coast (Masry 1974; Fritfelt 1989). Based on petrographic analysis (Oates et al. 1976), it is thought that the Arabian Ubaid ceramics were made in Mesopotamia and brought to this area by Mesopotamian traders.

Although C. Redman (1978) once considered that the southern Ubaid was a creation of migrations from the north into an unoccupied niche, the recent evidence of pre-Ubaid sites in the alluvium (Adams 1981; Huot 1987a,

1987b; 1989) and the connection of the early Ubaid wares to a "transitional" Samarra type (actually Ubaid 0 ceramics at Oueii predating the Choga Mami transitional material) shows that the Ubaid was an indigenous development in the south. Indeed, the direction of cultural impact during the Ubaid seems to have been south-to-north. Ubaid 1 ceramics are not found in the north, e.g., at Yarim Tepe II, and the characteristic temple architecture of the Ubaid appears early at Eridu whereas it is found only at the end of the northern Ubaid at Gawra. The "cultural unity" of the Ubaid, thus, seems due to two interrelated processes: first, the transmission of domesticated plants and animals from the north to the south and second, a cultural expansion from the burgeoning southern villages, which were based on flourishing agricultural systems, into the north.

The leading indication of cultural unity in the northern and southern Ubaid alike is the remarkably similar temple plans at Eridu and Gawra (see Heinrich 1982 for diagrams) and the presumed commonality of beliefs and values throughout Mesopotamia. Differing from the Halaf, which was interpreted as an interregional "economic interaction sphere," the Ubaid may be posited as a "cultural interaction sphere"; indeed, in the Ubaid may be found the embryo from which the historic Mesopotamian cultural boundary uniting Assyria and Babylonia was developed.

Although the northern region (Assyria) fully shares in historic Mesopotamian cultural institutions, it is apparent that in historic times the cultural center of Mesopotamia lay in the south. The roots of this southern nucleus (too casually called "Sumerian civilization" after the language in which the earliest documents were written) can perhaps be found in the succeeding Uruk period. Although it is a key period in understanding the evolution of Mesopotamian states, only one site has yielded any significant stratigraphic sequence (the type site itself) and associated architecture and artifactual assemblage.

If the Uruk period begins with a small

change in ceramic decoration (or the lack of it) and ends with the appearance of the first written documents, and if one notes a continuity in the ceramic technology and in the plans of temples, the scale of social organizational change in Uruk is in fact hardly predictable from the foregoing Ubaid. The massive temples of Uruk Levels V and IV with impressive sunken courtyards, pillared terraces, and a mighty acropolis of ceremonial buildings (some of which are as large as most Ubaid period sites) are testimony to the newly centralized political and economic activity in Uruk period urban sites.

In these Uruk conurbations massive surpluses were produced on vast estates that employed teams of workers, managers, and craft specialists. At this time writing was invented (Nissen 1988; Michalowski 1990) to keep track of this unprecedented economic differentiation and centralized direction in the great organizations of temples and palaces. This was not only a process of urbanization, but also one of ruralization, since the countryside was progressively depopulated and itself restructured according to the demands of the new city-states (Adams 1981; Nissen 1988).

The massive new division of labor in these city-states was the precondition for the establishment of southern Mesopotamian colonies up the Euphrates (Strommenger 1980; Sørensen 1986; Algaze 1989). This political interaction at the end of the Uruk was prefigured, of course, by the long-term knowledge of this area and its resources that can be traced into the Neolithic. The political expansion failed, however, shortly after the end of the Uruk as the colonies were abandoned. The Uruk implosion created the possibility of quick political domination of foreign regions (perhaps) by (individual) southern Mesopotamian city-states (since no political unity of southern Mesopotamia preceded that of Sargon in the twenty-fourth century B.C.). Having established hegemony over these regions, however, it was quite another matter to perpetuate control many hundreds of miles from the south,

and it is no surprise that the colonies quickly disappeared.

The urban implosion of the Uruk, then, sets the pattern for interaction among the city-states in southern Mesopotamia as independent religious centers, as defensive centers against other competing city-states, and as launching pads for both local and far-flung political adventures. The division of labor and extreme social stratification in the city-states further created demand centers for foreign goods, the production of goods for exchange, and the capitalization of trade missions to distant lands. Resulting from this evolutionary "phase-transition," individual city-states became the characteristic arenas of political, social, and economic activity in southern Mesopotamia for the next three millennia.

### Summary

In few areas of the world can the development — and demise — of a civilization be traced as thoroughly as it can in Mesopotamia. This is due to the ability of prehistorians to structure inquiries of social change with the consideration of the "outcomes" of such changes as historic Mesopotamian institutions. Similarly, those working in historic periods can better understand the context of social institutions by reference to the development of social and economic interactions that are depicted in the Mesopotamian prehistoric record.

In this essay into the genre of the ultra *longue durée*, I have explored the possibility that the roots of the Assyrian-Babylonian regional dichotomy characteristic of Mesopotamian historical times can be traced to the "later Neolithic" period of Mesopotamian prehistory. Bundles of northern and southern spheres of interaction, in which people in each region effected social and economic relations more intensively within, rather than across, geographic zones seem established in the sixth millennium B.C. Interaction be-

tween these zones, however, was not unimportant or infrequent and was based both on the environmental complementarity (and so the exchange of resources) and also on the long-term social interconnections of the people in those areas. In the Ubaid, such regional interaction was reflected in the formation of a belief system (clear in the common pantheon that was preserved, adapted, and transmitted over generations in the historic period) and a set of values and cultural institutions that bound them together against an external world order. In the Uruk period the process of urbanization and ruralization in the southern city-states included the invention of writing, foreign political adventures, and not least important, the development of new cultural institutions that made the south a central place in the ideological sphere that is Mesopotamian civilization.

The recent work of the Soviet expedition to northern Iraq has played an important role in understanding the nature of the early permanent agricultural villages on the northern plain has been pushed back a millennium before the Hassuna period. Now, from the recent discoveries at Nemrik and Qermez Dere, it seems that the process of agricultural development and of village life can be followed from the middle of the ninth millennium.

The nature of social organization in the Hassuna, Halaf, and northern Ubaid sites at Yarim Tepe has also been advanced by the work of the Soviet expedition. In this essay I have argued that such social and economic changes as are observed in these periods can best be evaluated within a consideration of the boundaries, scale, and meaning of the named periods. That is, trends towards social differentiation are not reflected predominantly in increased size of sites in these periods nor in any clear evidence of economic stratification (see Akkermans 1989 for a recent review of the mortuary data). It is the scale of interaction in which the sites are constituent parts that is a key factor in understanding the transformation of the moral

economies of village societies into the political economies of Mesopotamian states.

The concept of interaction spheres used in this chapter is at variance with the theories of ethnic replacement that some have employed to explain the transition between cultural phases in the "later Neolithic." It must be emphasized that the concept of interaction spheres does not preclude the investigation of ethnicity in prehistory. Indeed, it advances such investigations in two distinct ways.

First, the distinctive architecture, pottery, and (perhaps) burial practices of the Halaf culture appear related to the geographic extent of the Halaf that included northern Mesopotamia. Rather than seeing the Halaf as representing a large-scale ethnic replacement or demographic shift of people in northern Mesopotamia, however, it can be posited that whatever influence came into Mesopotamia from the northern Halaf region (Armenia, especially Anatolia, and northern Syria) was incorporated into a larger sphere of interregional interaction (see also Breniquet 1987). The Halaf interaction sphere thus included many ethnic groups whose elites became connected, new symbols and cultural values that were forged to promote such interactions, and new wealth and status that were created by the manipulation of such symbols and the attempts to control the flow of goods by elites.

Second, it is argued that ethnic groups are not "natural" social entities, but that ethnic groups have their origins in particular periods of time and in the context of newly emerging spheres of interaction. The concept of interaction spheres has social evolutionary significance, thus, for it specifies the conditions in which various social groups become ethnic groups by virtue of their members' self-identification (as descended from a common ancestor) and their regular interaction with other such groups that recognize that self-identification. Within interaction spheres, therefore, formerly autonomous (or nearly autonomous) local groups are transformed into ethnic groups through their participation in societies in which ethnicity, territoriality, occupation,

and status provide diverse and overlapping functions for their individual members. It is not ethnic groups that promote interaction, thus, but it is through interaction spheres that ethnicity can be constructed.

Finally, the social evolutionary significance of the formation of interaction spheres in prehistory has recently been stressed by Willey in his discussion of horizontal integration in the New World and by Chang (1986) for ancient China. Willey's view is that such regional integration is the product of ideological factors and that the earliest such horizontal styles, in Mesoamerica and the Andes, the Olmec and Chavin, were not reflections of political domination but of cultural interconnection. These interaction spheres (though Willey does not use the term) speed the transmission of ideas and make possible the creation of dependencies not based on kinship, but on economic and political power.

For Chang (1986, 234-45, 409-11), the Lungshanoid horizon is an interaction sphere in that it cuts across — but does not eliminate — localized regional cultures, and within its boundary the many commonalities in material culture reflect interlinkages among these societies. From this "later Neolithic" interaction sphere, the three overlapping dynasties of the Sandai period emerge as political cores, foci of hegemonic competition, but also through which goods and ideas were circulated. Later political unification of China followed the establishment of this Chinese interaction sphere.

In Mesopotamia, as has been seen in this brief essay, the early stages in the evolution of Mesopotamian states and civilization are those in which interaction spheres are formed. Social and economic change in the "later Neolithic" and then in the Ubaid cannot be seen in increased village size, the formation of economic or political central places, or in the superfluity of wealth controlled by nascent elites. Rather, the organizational restructuring in these modest villages of the "later Neolithic" and Ubaid can be perceived in the formation of spheres of interaction in

which sites, social stratification, and the creation of networks of power and new sorts of behavior are rendered possible, while others are less possible or impossible (after Wolf 1990, 586-87). If the enormity of change in the Uruk seems so unpredictable from the deceptively modest material restructurings of the preceding periods, the Uruk is also unimaginable without the development of those spheres of interaction.

Of course, the study of Mesopotamian in-

teraction spheres does not supplant investigations of technology, subsistence, and local social systems. Knowledge of those topics alone, however, cannot lead to understanding the formation of cultural boundaries — how people define themselves, how they interact are cobbled together, and how they interact in socially constructed spaces in which spaces are also containers of power (Watts 1992, 123). That is what "Mesopotamia" is to us and what was culturally reproduced in the past.



## Select Bibliography

(Note: In addition to references cited in this volume, additional references to publications of the Soviet Expedition are included. This is not, however, an exhaustive bibliography nor were exact page numbers and bibliographic details of obscure publications available to the editor.)

- al-Adami, K.  
1968 Excavations at Tell es-Sawwan. *Summer* 24:54-94.
- al-Adami, K. A.  
1968 Excavations at Tell es-Sawwan (Second Season). *Summer* 24:57-60.
- Adams, R. McC.  
1981. *Heartland of Cities*. Chicago: University of Chicago Press.
- Akkermans, P., M. van Loon, J. J. Roodenberg, and M. Waterbolk  
1982 The 1976-1977 Excavations at Tell Bouqras. *Annales Archéologiques Arabes Syriennes* 32:45-57.
- Akkermans, P.M.M.G.  
1989 Half Mortuary Practices: A Survey. In *To the Euphrates and Beyond: Archaeological Studies in Honour of Maurits N. van Loon*, O.M.C. Haex, H. H. Curvers, and P.M.M.G. Akkermans eds., 75-88. Rotterdam: A. Balkema.
- Akkermans, P.M.M.G. and Marie Le Mière  
1992 The 1988 Excavations at Tell Sabi Abyad, a Later Neolithic Village in Northern Syria. *American Journal of Archaeology* 96:1-22.
- Algaze, G.  
1989 The Uruk Expansion: Cross-Cultural Exchange in Early Mesopotamian Civilization. *Current Anthropology* 30:571-608.
- Antonova, E. V.  
1974 *Antropomorfnyaya skul'ptura drevnix zemledeit'sev Pervodnej i Srednej Azii*. Moscow: Nauka.
- Aurenche, O., J. Evin, and F. Hours, eds.  
1987 *Chronologies du Proche Orient*. Oxford: British Archaeological Reports.
- Bader, N. O.  
1975 Rannezemeledel'cheskoe poselenie Tell' Sotto (po raskopkam 1971, 1973-1974 gg. (The early agricultural settlement of Tell Sotto according to the excavations of 1971, 1973-74, chapter 3 this volume). *Sovetskaya Arzeologiya*, 117-32.
- 1979 Tell Maghzaliyah: ranneneoliticheski pamyatnik na severe Irake (Tell Maghzaliyah: an early Neolithic site in northern Iraq, chapter 2a this volume). *Sovetskaya Arzeologiya*, 99-111.
- 1982 Nekatorye rezultaty rabot na rannenezemeledel'skom poseleнии Kyultepe v severnom Irake (Some results of the work on the early agricultural settlement of Kültepe in northern Iraq, chapter 4 this volume). In *Arzeologiya Starogo i Novogo Sveta*, V. I. Gul'aeved., 50-57. Moscow: Nauka.

- 1983 Sources of the Hassuna Culture and the Development of Agriculture in the Sinjar Plain. Paper delivered at the First USA-USSR Archaeological Exchange, Cambridge, MA.
- 1984 Pervonachal'noe stanovlenie zemledeliya i skotovodstva v Severnoj Mesopotamii (The initial formation of agriculture and animal husbandry in northern Mesopotamia). *Kraikie Soobshcheniya Instituta Arzeologii* 180:60-63.
- 1989 *Drevnejshie Zemledel'nyy Severnoj Mesopotamii* (Earliest farmers of northern Mesopotamia). Moscow: Nauka.
- Bader, N. O., N. Ya. Merpert, and R. M. Munchaev  
1981 The Soviet Expedition's Surveys in the Sinjar Valley, 1977. *Sumer* 37:55-95.
- Barth, F.  
1969 Introduction. In *Ethnic Groups and Boundaries*, F. Barth ed., 9-38. Boston: Little, Brown.
- Bar-Yosef, O.  
1980 Prehistory of the Levant. *Annual Review of Anthropology* 9:101-33.
- Bakhteyev, F. Kh. and Z. V. Yanushevich  
1980 Discoveries of Cultivated Plants in the Early Farming Settlements of Yarim Tepe I and Yarim Tepe II in Northern Iraq. *Journal of Archaeological Science* 7:167-178.
- Bashilov, V. A. and A. V. Kuza  
1972 *Drevnie Tsvilitzitsii Peru/Bol'itii*. Moscow: Nauka.
- Bashilov, V. A., O. G. Bolshakov, and A. V. Kuza  
1980 The Earliest Strata of Yarim Tepe I. *Sumer* 36:43-64.
- Bernbeck, Reinhard  
1990 *Aufbauprozesse der haushlichen Produktionsweise. Das Beispiel Mesopotamien*. Ph.D. diss., Freie Universität Berlin.
- Bibikova, V. I.  
1981 Zhivotnovodstvo v severnoj Mesopotamii v V. tysyacheletii do n.e. (po materialam Khalafskogo poseleniya Yarim Tepe II). Appendix 2 (Animal husbandry in northern Mesopotamia in the fifth millennium B.C. [according to

- data of the Halaf settlement Yarim Tepe II]; in *Rannemel'del'cheskie Poseleniya Severnoj Mesopotamii*, R. M. Munchaev and N. Ya. Merpert eds., 299-307. Moscow: Nauka.
- Bogoslovskaya, P. F.  
1972 K probleme slozhniya Khalafskoj kultury. *Sovetskaya Arzeologiya* no. 2:3-46.
- Bokönyi, S.  
1973 The Fauna of Umm Dabaghiyah: A Preliminary Report. *Iraq* 35:9-11.
- Braidwood, L., R. J. Braidwood, B. Howe, C. A. Reed, and P. J. Watson, eds.  
1983 *Prehistoric Archaeology Along the Zagros Flanks*. Oriental Institute Publications 105. Chicago: Oriental Institute Press.
- Braidwood, R.  
1945 Introduction to "Teil Hassuna" by S. Lloyd and F. Safar. *Journal of Near Eastern Studies* 4:255-89.
- 1960 Seeking the World's First Farmers in Persian Kurdistan. *Illustrated London News*, 22 Dec. 1960:695.
- 1969 Prehistoric Investigations in Southeastern Turkey. *Science* 164, no. 3885: 1275-76.
- 1970 (Letter signed Bob Braidwood). *Archaeological Newsletter* Nov. 8:1-3. Oriental Institute, University of Chicago.
- 1973 The Early Village in Southwestern Asia. *Journal of Near Eastern Studies* 32:34-39.
- Braidwood, R. and L. Braidwood  
1960 *Excavations in the Plain of Amioch I. The Earlier Assemblages: Phases A-J*. Oriental Institute Publications 31. Chicago: Oriental Institute.
- Braidwood, R., L. Braidwood, J. Smith, and C. Leslie  
1952 Matarrah: A Southern Variant of the Hassuna Assemblage, excavated 1948. *Journal of Near Eastern Studies* 11:1-75.
- Braidwood, R., L. Braidwood, E. Tulane, and A. Perkins  
1944 New Chalcolithic Material of Samarrah Type and its Implications. *Journal of Near Eastern Studies* 3:47-104.

- Braidwood, R., H. Cambel, B. Lawrence, C. Redman, and R. Stewart  
1974 Beginnings of Village-Farming Communities in Southeastern Turkey. *Proceedings of the National Academy of Sciences* Feb. 1974:568-72.
- Braidwood, R. and B. Howe  
1960 *Prehistoric Investigations in Iraqi Kurdistan*. The Oriental Institute Studies in Ancient Oriental Civilizations, vol. 31. Chicago: University of Chicago.
- Breniquet, C.  
1987 Nouvelle hypothese sur la disparition de la culture de Halaf. In *Prehistoire de la Mesopotamie*, J.-L. Huot ed., 231-41. Paris: CNRS.
- Brinkman, J. A.  
1981 Hurrians in Babylonia in the late Second and Millennium B. C.: An Unexploited Minority Resource for Socio-economic and Philological Analysis. In *Studies on the Civilization and Culture of Nuzi and the Hurrians*, M. Morrison and D. Owen eds., 27-35. Winona Lake, IN: Eisenbraun's.
- Bronson, B.  
1975 The Earliest Farmers: Demography as Cause and Consequence. In *Population, Ecology, and Social Evolution*, S. Polgar ed., 53-78. The Hague: Mouton.
- Caldwell, J. R.  
1964 Interaction Spheres in Prehistory. In *Hopewellian Studies*, J. R. Caldwell and R. L. Hall eds., 133-43. Springfield: Illinois State Museum Scientific Papers, No. 12.
- Campbell Thompson, R. and M. E. L. Mallowan  
1933 The British Museum Excavations at Nineveh, 1931-32. *Annals of Archaeology and Anthropology*, University of Liverpool 20:71-186.
- Cambel, H., and R. Braidwood  
1970 An Early Farming Village in Turkey. *Scientific American* 222(3):50-56.
- Cauvin, J.  
1978 *Les premiers villages de Syrie-Palestine du IXe au VIIe millénaire avant J. C.* Lyon.
- Eph' al, I.  
1978 The Western Minorities in Babylonia in the 6th-5th Centuries B. C.: Maintenance and Cohesion. *Orientalia* 47:74-90.
- 1988 La néolithisation de la Turquie du Sud-est dans son contexte proche-orientale. *Anatolica* 15:69-80.
- Chang, K. C.  
1986 *The Archaeology of Ancient China*, 4th rev. ed. New Haven: Yale University Press.
- Charpin, D.  
1977 L'onomastique hurrite à Dilbat et ses implications historiques. In *Méthodologie et critiques I: problèmes concernant les Hurrites*. Paris: CNRS.
- Childe, V. G.  
1956 *Drevnejshii Vostok v Svete Noyuz Rashpoka* (Russian translation of *New Light on the Most Ancient East*, 4th rev. ed., 1952).
- Clarke, D.  
1978 *Analytical Archaeology*, 2d ed. rev. by R. Chapman (original 1968). London: Methuen.
- Coghlan, H. H.  
1975 *Notes on the Prehistoric Metallurgy of Copper and Bronze in the Old World*. Oxford: Pitt-Rivers Museum.
- Dabbagh, T.  
1965 Hassuna Pottery. *Sumer* 21:93-112.
- Davidson, T. and H. McKerrell  
1976 Pottery Analysis and Halaf Trade in the Khabur Headwaters Region. *Iraq* 38:45-56.
- 1980 Neutron Activation Analysis of Halaf and Ubaid Pottery from Tell Arpachiyah and Tepe Gawra. *Iraq* 42:131-54.
- Djaparidze, O. M. and A. I. Djavakishvili  
1971 *The Culture of the Earliest Agricultural Population in the Territory of Georgia*. Tbilisi.
- Dosch, G. and K. Deller  
1981 Sieben Kassitengenerationen in Temena and Surinwi. In *Studies on the Civilization and Culture of Nuzi and the Hurrians*, M. Morrison and D. Owen eds., 91-113. Winona Lake: Eisenbraun's.

- Falkenstein, A.  
1936 *Archaische Texte aus Uruk*. Leipzig.
- Flannery, K.  
1968 The Olmec and the Valley of Oaxaca: A Model for Inter-regional Interaction in Formative Times. In *Dumbarton Oaks Conference on the Olmec*, by E. Benson ed., 79-110. Washington, D. C.: Dumbarton Oaks.
- Flannery, K. and J. C. Wheeler  
1967 Animal Bones from Tell es-Sawwan, Level III. *Sumer* 23:179-82.
- Frankel, D.  
1979 *Studies on Halaf Pottery*. London: British Museum Publications.
- Frifelt, K.  
1989 Ubaid in the Gulf Area. In *Upon this Foundation*, E. Henrickson and I. Thuesen eds., 405-18. Copenhagen: Carsten Niebuhr Institute of Ancient Near Eastern Studies, University of Copenhagen.
- Fukai, S., K. Hariuchi, and T. Matsutani  
1970 *Tell el-'Ubeid-Thalathat. The Excavations of Tell II*. Tokyo University Iraq-Iran Archaeological Expedition, Report 2. Tokyo: University of Tokyo.
- Fukai, S. and T. Matsutani  
1981 *Tell el-'Ubeid-Thalathat. The Excavation of Tell II*, vol. 4. Tokyo: University of Tokyo.
- Garstang, J.  
1953 *Prehistoric Mersin*. Oxford: Clarendon Press.
- Goff, B.  
1963 *Symbols of Prehistoric Mesopotamia*. New Haven: Yale University Press.
- Harris, D.  
1989 An Evolutionary Continuum of People-Plant Interaction. In *Foraging and Farming: The Evolution of Plant Exploitation*, D. R. Harris and G. C. Hillman eds., 11-26. London: Unwin Hyman.
- Heinrich, E.  
1982 *Tempel und Heiligtümer im alten Mesopotamien*. Berlin: Walter de Gruyter.
- Helbaek, H.  
1964 Early Hassunan Vegetable Food at Tell es-Sawwan near Samarra. *Sumer* 20:45-48.
- 1972 Traces of Plants in the Early Ceramic Site of Umm Dabaghiyah. *Iraq* 34:17-19.
- Henrickson, E. and I. Thuesen, eds.  
1989 *Upon this Foundation: The Ubaid Reconsidered*. Copenhagen: Carsten Niebuhr Institute of Ancient Near Eastern Studies, University of Copenhagen.
- Herzfeld, E.  
1930 *Die Ausgrabungen von Samarra*, vol. 5. Die vorgeschichtlichen Töpferzeiten von Samarra. Berlin.
- Hijara, I.  
1978 Three New Graves at Arpachiyah. *World Archaeology* 10:125-28.
- 1980 Arpachiyah 1976. *Iraq* 42:131-54.
- Hole, F.  
1977 *Studies in the Archaeological History of the Deh Luran Plain. The Excavation of Chogha Sefid*. Memoirs of the Museum of Anthropology 9. Ann Arbor: University of Michigan Press.
- 1984 A Reassessment of the Neolithic Revolution. *Paleorient* 10:49-60.
- Hole, F., K. Flannery, and J. A. Neely  
1969 *Prehistory and Human Ecology of the Deh Luran Plain*. Memoirs of the Museum of Anthropology 1. Ann Arbor: University of Michigan Press.
- Huot, J.  
1979 Uhaidian Villages of Lower Mesopotamia. Permanence and Evolution from Ubaid 0 to Ubaid 4 as seen from Tell el-'Oueili. In *Upon this Foundation*, E. Henrickson and I. Thuesen eds., 19-42. Copenhagen: Carsten Niebuhr Institute for Ancient Near Eastern Studies, University of Copenhagen.
- 1987a L'apport de Tell el-'Oueili la chronologie d'Obeid. In *Chronologies du Proche Orient*, O. Aurenche, J. Even, and F. Hours eds., 465-72. Oxford: British Archaeological Reports.
- 1987b La phase 'Oueili de l'époque d'Obeid. *Préhistoire de la Mésopotamie*, J.-L. Huot ed., 129-51. Paris: CNRS.

- Ingholt, H.  
1957 The Danish Dokan Expedition. *Sumer* 13:214-45.
- Jasim, S.  
1985 *The Ubaid Period in Iraq*. Oxford: British Archaeological Reports.
- 1989 Structure and Function in an Ubaid Village. In *Upon this Foundation*, E. Henrickson and I. Thuesen eds., 79-90. Copenhagen: Carsten Niebuhr Institute of Ancient Near Eastern Studies, University of Copenhagen.
- Jawad, A. J.  
1965 *The Advent of the Era of Townships in Northern Mesopotamia*. Leiden: Brill.
- Kamp, K. and N. 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* 237:85-103.
- Kaplan, J.  
1960 The Relations of the Chalcolithic Pottery of Palestine to Halafian Ware. *Bulletin of the American Schools of Oriental Research* 159:32-36.
- Kenyon, K.  
1957 *Digging up Jericho*. New York: Praeger.
- Kingery, D., P. Vandiver, and M. Prickett  
1988 The Beginnings of Pyrotechnology, part II: Production and Use of Lime and Gypsum Plaster in the Pre-Pottery Neolithic Near East. *Journal of Field Archaeology* 15:219-44.
- Kirkbride, D.  
1968 Beidha: Early Neolithic Life South of the Dead Sea. *Antiquity* 42:263-74.
- 1972 Umm Dabaghiyah 1971: A Preliminary Report. An Early Ceramic Farming Settlement in Marginal North Central Jezira, Iraq. *Iraq* 34:3-15.
- 1973a Umm Dabaghiyah 1973: A Third Preliminary Report. *Iraq* 35:205-9.
- 1973b Umm Dabaghiyah 1972: A Second Preliminary Report. *Iraq* 35:1-7.
- 1974 Umm Dabaghiyah: A Trading Outpost? *Iraq* 36:85-92.
- 1975 Umm Dabaghiyah 1974: A Fourth Preliminary Report. *Iraq* 37:3-10.
- Kohl, P. L.  
1978 The Balance of Trade in Southwestern Asia in the Mid-Third Millennium B. C. *Current Anthropology* 19:463-92.
- 1987a The Ancient Economy, Transferable Technologies and the Bronze Age World-System: A View from the Northeastern Frontier of the Ancient Near East. In *Centre and Periphery in the Ancient World*, M. Rowlands, J. Gledhill, and M. T. Larsen eds., 13-24. Cambridge: Cambridge University Press.
- 1987b The Use and Abuse of World Systems Theory: The Case of the "Pristine" West Asian State. *Advances in Archaeological Method and Theory* 11:1-36.
- Kozłowski, S. K., ed.  
1990a *Nemrik 9: Pre-Pottery Neolithic Site in Iraq (General Report—Seasons 1985-86)*. Warsaw: Wydawnictwa Uniwersytetu Warszawskiego.
- 1990b Nemrik 9, a PPN Site in Northern Iraq. In *Préhistoire du Levant: processus de Changement Culturel—Hommages à Francis Hours*, O. Aurenche, M. C. Cauvin, and P. Sanlaville eds., 29-35. Paris: CNRS.
- Kushnareva, K. H. and T. N. Chubinishvili  
no date *Ancient Cultures of the Southern Caucasus, V-VIII Millennia B. C.* Lambert, W. G.
- Lambert, W. G.  
1961 Ancestors, Authors and Canoncity. *Journal of Cuneiform Studies* 11:1-14, 112.
- Le Blanc, S.  
1971 *Computerized, Conjective Archaeology and the Near Eastern Halaf*. Ph.D. diss., Washington University, St. Louis.
- Le Blanc, S. and P. J. Watson  
1973 A Comparative Statistical Analysis of Painted Pottery from Seven Halafian Sites. *Paleorient* 1:117-33.
- Lees, G. M. and N. L. Falcon  
1952 The Geographical History of the Mesopotamian Plains. *Geographical Journal* 118:24-39.

## Bibliography

- Lisitsyna, G. N.  
1984 Problemy stanoveniya proizvodnykh form khozyaystva v svete novykh paleontobotaničeskikh issledovanij v porednej Azii. *Kratkie Soobščeniya Instituta Arxeologii* 180:60-63.
- Lloyd, S.  
1938 Some Ancient Sites in the Jebel Sinjar District. *Iraq* 5:123-42.  
1976 *Archaeology of Mesopotamia*. London: Thames and Hudson.
- Lloyd, S. and F. Safar  
1945 Tell Hassuna. *Journal of Near Eastern Studies* 4:255-89.
- Limet, H.  
1960 *Le travail du métal au pays de Sumer au temps de la IIIe dynastie d'Ur*. Paris: Société d'Édition "Les belles Lettres."
- van Loon, M. and J. H. Skinner  
1968 The Oriental Institute Excavations at Mueybit, Syria: Preliminary Report on the 1965 Campaign. *Journal of Near Eastern Studies* 27:265-90.
- Machinist P. B.  
1976 Literature as Politics: The Epic of Tukulti-Ninurta and the Bible. *Catholic Biblical Quarterly* 38:455-82.  
1985 On Self-Consciousness in Mesopotamia. In *The Origins and Diversity of Axial Age Civilizations*, S. N. Eisenstadt ed., 183-202. Albany: State University of New York Press.
- Mallowan, M. E. L.  
1936 Excavations at Tell Chagar Bazar and the Archaeological Survey of the Habur. *Iraq* 3:1-86.  
1946 Excavations in the Balikh Valley. *Iraq* 8:111-60.  
1947 Excavations at Brak and Chagar Bazar. *Iraq* 9:1-259 (entire volume).  
1956 *Twenty-five Years of Mesopotamian Discovery*. London: British School of Archaeology in Iraq.
- Mallowan, M. E. L. and J. Cruikshank Rose  
1935 Excavations at Tell Arpachiyah, 1933. *Iraq* 2:1-178.
- Masry, A.  
1974 *Preliminary in Northeastern Arabia. The Problem of Inter-regional Interaction*. Coconut Grove, FL: Field Research Projects.
- Masson, V. M.  
1964 *Srednyaya Azija i Blizhnij Vostok*. Moscow-Leningrad: Nauka.
- Meldgaard, J., P. Mortensen, and H. Thrane  
1963 Excavations of Tepe Guran, Luristan. *Acta Archaeologica* 34:97-133.
- Meilaart, J.  
1965 *Earliest Civilizations of the Near East*. New York: McGraw-Hill.  
1966 *The Chalcolithic and Early Bronze Ages in the Near East and Anatolia*. Beirut: Khayats.  
1967 *Çatal Hüyük. A Neolithic Town in Anatolia*. London: Thames and Hudson.  
1975 *The Neolithic of the Near East*. London: Thames and Hudson.
- Mellink, M.  
1964 Archaeology in Asia Minor. *American Journal of Archaeology* 68:149-66.
- Merpert, N. Ya.  
1978 Migratsii v epoxy Neolita i Eneolita. *Sovetskaya Arxeologiya*, no. 3:9-28.  
1984 'Neoliticheskaia revolyutsiya' na Blizhnem Vostoke (nekotorye momenty razrabotki problemy v zarybeznoj nauke) (The 'Neolithic Revolution' in the Near East [Some features of the treatment of this problem in foreign scholarship]). In *Kratkie Soobščeniya Instituta Arxeologii* 180:53-59.
- Merpert, N. Ya. and R. M. Munchaev  
1969 Excavations at Yarim Tepe. First Preliminary Report. *Sumer* 25:125-31.  
1971a Excavations at Yarim Tepe 1970. The Archaeological Research in the Sinjar Valley. *Sumer* 27:23-33.  
1971b Rannezemledeľ'českoe poseleniya severnoj Mesopotamii. *Sovetskaya Arxeologiya* (English translation in *Soviet Anthropology and Archaeology* 10 [1971-72]:203-52; see also *Earliest Agricultural Settlements in Northern Mesopotamia*. Trans. Irene Etkin Goldman, ed. Henry Field. Field Research Projects: Coconut Grove, Miami, 1972).  
1971c Excavations at Yarim Tepe. Second Preliminary Report. *Sumer* 27:9-22.  
1973 Early Agricultural Settlements in the Sinjar Plain, Northern Iraq. *Iraq* 35:93-113.
- Mortensen, P.  
1970 Tell Shimshara. The Hassuna Period. *Historisk-Filosofisk Skriftser Danske* 5(2). Copenhagen.  
1973 A Sequence of Samarran Flint and Obsidian Tools from Choga Mami. *Iraq* 35:37-55.
- Munchaev, R. M.  
1975 *Kavkaz na Zare Bronzovogo Veka*. Moscow: "Nauka"  
1984 Nekotorye problemi arxeologii Mesopotamii v svete novykh issledovanij (iz itogov rabot Sovetskoj ekspeditsii v Irake). (Some problems in the archaeology of Mesopotamia in light of the latest discoveries [from results of the Soviet expedition in Iraq, chapter 13 this volume]). In *Kratkie Soobščeniya Instituta Arxeologii* (Brief reports of the Institute of Archaeology) 180:38-45.
- Munchaev, R. M. and N. O. Bader  
1969 Excavations at Yarim Tepe. *Sumer* 25:125-33.  
1979 Rannezemledeľ'českoe poselenie v Severnoj Mesopotamii. *Vestnik AN SSSR* 2.  
Munchaev R. M. and N. Ya. Merpert  
1970 Sovetskaya arxeologičeskaya ekspeditsiya v Irake. *Vestnik AN SSSR*, no. 10.  
1971 The Archaeological Research in the Sinjar Valley. *Sumer* 27: 23-32.  
1972 Sovetskie arxeologičeskie issledovaniya v severo-zapadnom Irake. *Vestnik AN SSSR*, no. 1.  
1973 Excavations at Yarim Tepe 1972. Fourth Preliminary Report. *Sumer* 29:3-16.  
1981 *Rannezemledeľ'českije Poseleniya Severnoj Mesopotamii*. Moscow: Nauka.
- Munchaev, R. M., N. Ya. Merpert, N. O. Bader, V. A. Bashilov, O. G. Bolshakov, V. I. Gulae, A. V. Kouza, I. G. Narimanov  
1977 Issledovaniya Irakskoj Ekspeditsii. *Arxeologičeskaya Otkrytiya* 1976.
- Nissen, H.  
1968 Survey of an Abandoned Modern Village. *Sumer* 24:107-14.  
1988 *The Early History of the Near East*. Chicago: University of Chicago Press.
- 1977 Drevnejshaya metallurgiya Mesopotamii. *Sovetskaya Arxeologiya* 1971, no. 3 (see chapter 12 this volume).  
1982a Pogrebal'nyj obyad plemeny xalařskoj kul'tury (Mesopotamiya) (Burial practices of the tribes of the Halaf culture, chapter 10 this volume). In *Arxeologiya Starogo i Novogo Sveta*, edited by V. I. Gulae, 28-49. Moscow: Nauka.  
1982b Poselenie Ubeidskoi kul'tury Yarim Tepe III v severnoj Mesopotamii (The Ubaid settlement of Yarim Tepe III in northern Mesopotamia, chapter 11 this volume). In *Sovetskaya Arxeologiya* 133-49.  
1983 Peopling of the Sinjar Valley in Mesopotamia and the Structure of its Early Agricultural Settlements. Paper delivered at the First USA-USSR Archaeological Exchange, Cambridge, MA.
- Merpert, N. Ya., R. M. Munchaev, and N. O. Bader  
1976 The Investigations of the Soviet Expedition in Iraq 1973. *Sumer* 32:25-61.  
1977 The Investigations of the Soviet Expedition in Iraq 1974. *Sumer* 33:65-104.  
1978 Soviet Investigation of the Sinjar Plain. *Sumer* 34:27-71.  
1981 Investigations of the Soviet Expedition in Northern Iraq, 1976. *Sumer* 37:22-54.
- Michalowski, P.  
1983 History as Charter: Some Observations on the Sumerian King List. *Journal of the American Oriental Society* 103:237-48.  
1990 Early Mesopotamian Communicative Systems: Art, Literature, and Writing. In *Investigating Artistic Environments in the Ancient Near East*, edited by A. Gunter, 53-69. Washington, D.C.: Smithsonian Institution Press.
- Moore, A. M. T.  
1975 The Excavation of Tell Abu Hureyra in Syria. A Preliminary Report. *Proceedings of the Prehistoric Society* 41:50-77.  
1985 The Development of Neolithic Societies in the Near East. *Advances in World Archaeology* 5:1-69.

- Oates, D.  
1965 Tell al Rimah. *Iraq* 27:62-80.  
1967 *Studies in the Ancient History of Northern Iraq*. Oxford: Oxford University Press (1968).
- Oates, D. and J.  
1976 *The Rise of Civilization*. Oxford: Elsevier.
- Oates, J.  
1968 Prehistoric Investigations near Mandali, Iraq. *Iraq* 30:1-20.  
1969 Choga Mami 1967-68: A Preliminary Report. *Iraq* 31:115-52.  
1972a A Radiocarbon Date from Choga Mami. *Iraq* 34:49-53.  
1972b Prehistoric Settlement Patterns in Mesopotamia. In *Man, Settlement and Urbanism*, P. Ucko, R. Tringham, and G. Dimbleby eds., 299-310 London: Duckworth.
- 1973 The Background and Development of Early Farming Communities in Mesopotamia and the Zagros. *Proceedings of the Prehistoric Society* 39:147-81.  
1976 Early Irrigation Agriculture in Mesopotamia. In *Problems in Economic and Social Archaeology*, G. Sieveking, I. Longworth, and K. Wilson eds., 109-36. London: Duckworth.
- 1978 Religion and Ritual in Sixth Millennium B.C. Mesopotamia. *World Archaeology* 10:117-24.  
1980 Land use and Population in Prehistoric Mesopotamia. In *L'archéologie de l'Iraq*, M.-T. Barrelet ed., 303-34. Paris: CNRS.
- 1983 Ubaid Mesopotamia Reconsidered. In *The Hilly Flanks: Essays on the Prehistory of Southwest Asia presented to Robert J. Braidwood*, T. C. Young, Jr., P.E.L. Smith, and P. Mortensen eds., 251-82. Chicago: The Oriental Institute.
- 1987 Ubaid Chronology. In *Chronologies du Proche Orient*, O. Aurenche, J. Evin, and F. Hours eds., 473-82. Paris: CNRS.
- Oates, J., T. E. Davidson, and H. McKerrell  
1976 Sea-faring Merchants of Ur? *Antiquity* 51:221-34.
- Oppenheim, M. Freiherr von  
1943 *Tell Haluf I: Die prähistorischen Funde*, H. Schmidt ed. Berlin: Walther de Gruyter.
- Perkins, A. L.  
1957 *The Comparative Archaeology of Mesopotamia*. Chicago: Oriental Institute.
- Porada, E.  
1965 The Relative Chronology of Mesopotamia. In *Chronologies in Old World Archaeology*, R. Ehrich ed., 133-200. Chicago: University of Chicago Press.
- Reade, J.  
1968 Tell Taya. *Iraq* 30:234-68.  
1971 Tell Taya. *Iraq* 33:87-100.
- Redman, C.  
1978 *The Rise of Civilization: From Early Farmers to Urban Society in the Ancient Near East*. San Francisco: W. H. Freeman.
- Reilly, E. B.  
1940 Test Excavations at Tilki Tepe. *Türk Tarih, Arkeoloji ve Etnografya Dergisi*:156-65.
- Rubin, M. and C. Alexander  
1960 U.S. Geological Survey Radiocarbon Dates V. *Radiocarbon* 2:129-85.
- Sato, J., T. Sato, Y. Otomori, and H. Suzuki  
1969 University of Tokyo Radiocarbon Measurements II. *Radiocarbon* 11:509-14.
- Schortman, E.  
1988 Interregional Interaction in Prehistory: The Need for a New Perspective. *American Antiquity* 54:52-65.
- Schortman, E. and P. Urban  
1987 Modeling Interregional Interaction in Prehistory. *Advances in Archaeological Method and Theory* 11:37-95.
- Selimkhanov, I. R.  
1970 Razzadannye sekrety drevnej bronzy. (See chap. 12, note 5, in original Russian, note 13).
- Sherratt, A.  
1980a Plough and Pastoralism: Aspects of the Secondary Products Revolution. In *Pattern in the Past: Studies in Memory of David L. Clarke*, N. Hammond et al. ed., 261-305. Cambridge: Cambridge University Press.
- Oates, D.  
1965 Tell al Rimah. *Iraq* 27:62-80.  
1967 *Studies in the Ancient History of Northern Iraq*. Oxford: Oxford University Press (1968).
- Oates, D. and J.  
1976 *The Rise of Civilization*. Oxford: Elsevier.
- Oates, J.  
1968 Prehistoric Investigations near Mandali, Iraq. *Iraq* 30:1-20.  
1969 Choga Mami 1967-68: A Preliminary Report. *Iraq* 31:115-52.  
1972a A Radiocarbon Date from Choga Mami. *Iraq* 34:49-53.  
1972b Prehistoric Settlement Patterns in Mesopotamia. In *Man, Settlement and Urbanism*, P. Ucko, R. Tringham, and G. Dimbleby eds., 299-310 London: Duckworth.
- 1973 The Background and Development of Early Farming Communities in Mesopotamia and the Zagros. *Proceedings of the Prehistoric Society* 39:147-81.  
1976 Early Irrigation Agriculture in Mesopotamia. In *Problems in Economic and Social Archaeology*, G. Sieveking, I. Longworth, and K. Wilson eds., 109-36. London: Duckworth.
- 1978 Religion and Ritual in Sixth Millennium B.C. Mesopotamia. *World Archaeology* 10:117-24.  
1980 Land use and Population in Prehistoric Mesopotamia. In *L'archéologie de l'Iraq*, M.-T. Barrelet ed., 303-34. Paris: CNRS.
- 1983 Ubaid Mesopotamia Reconsidered. In *The Hilly Flanks: Essays on the Prehistory of Southwest Asia presented to Robert J. Braidwood*, T. C. Young, Jr., P.E.L. Smith, and P. Mortensen eds., 251-82. Chicago: The Oriental Institute.
- 1987 Ubaid Chronology. In *Chronologies du Proche Orient*, O. Aurenche, J. Evin, and F. Hours eds., 473-82. Paris: CNRS.
- Oates, J., T. E. Davidson, and H. McKerrell  
1976 Sea-faring Merchants of Ur? *Antiquity* 51:221-34.

- 1980b Water, Soil and Seasonality in Early Cereal Cultivation. *World Archaeology* 11:313-30.
- Simpson, K.  
1988 Early Soundings. *Qraya Modular Reports, No. 1. Syro-Mesopotamian Studies* 4:4.  
Smith, P. E. L.  
1968 Ganj Dareh Tepe. *Iran* 6:158-60.  
1970 Ganj Dareh Tepe. *Iran* 8:178-80.
- Stein, Gil  
1991 Imported Ideologies and Local Identities: North Mesopotamia in the Fifth Millennium B.C. Paper presented at fifty-sixth annual meeting of the Society of American Archaeology, New Orleans, 26 April 1991.
- Strommenger, E.  
1980 *Habuba Kabira*. Mainz: Verlag Philipp von Zabern.
- Struever, S. and G. Houart  
1972 An Analysis of the Hopewell Interaction Sphere. In *Social Exchange and Interaction*, E. Wilmsen ed., 47-78. Anthropology Papers, no. 46. Museum of Anthropology, Ann Arbor.
- Stuckenrath, Jr., R. and E. K. Ralph  
1965 University of Pennsylvania Radiocarbon Dates VIII. *Radiocarbon* 7:187-99.
- Sørensen, D.  
1986 The Dry Farming Belt: The Uruk Period and Subsequent Developments. In *The Origin of Cities in Dry-Farming Syria and Mesopotamia in the Third Millennium B.C.*, H. Weiss ed., 7-43. Guilford, CT: Four Quarters Publishing.
- Taylor, J. P., M. V. Williams, and J. W. Waechter  
1950 The Excavations at Sakce Gözü. *Iraq* 12:53-138.
- Tobler, A. J.  
1950 *Excavations at Tepe Gawra*, vol. 2. Philadelphia: University of Pennsylvania.
- Voigt, M.  
1985 Village on the Euphrates: Excavations at Neolithic Gritille in Turkey. *Expedition* 27(1):10-24.
- 1986 Review of *The Hilly Flanks and Beyond: Essays on the Prehistory of Southwestern Asia*, T. C. Young, Jr., P.E.L. Smith, and P. Mortensen eds. *Paleorient* 12:103-13.  
1990 Reconstructing Neolithic Societies and Economies in the Middle East: An Essay. *Archaeomaterials* 4:1-14.
- al-Waily, F. and B. Abu es-Souf  
1965 The Excavations at Tell es-Sawwan, First Preliminary Report (1964). *Summer* 21:17-22.
- Waterbolk, H. T.  
1971 Working with Radiocarbon Dates. *Proceedings of the Prehistoric Society* 37:15-33.
- Watkins, T.  
1990 The Origins of House and Home? *World Archaeology* 21:336-47.  
1992 Pushing Back the Frontiers of Mesopotamian History. *Biblical Archaeologist* 55 (December 4):176-181.
- Watkins, T. and D. Baird  
1987 *Qermiz Dere: The Excavation of an Aceramic Neolithic Settlement near Tell Afar, N. Iraq*. Edinburgh: Interim Report, Project Paper No. 6, Dept. of Archaeology, University of Edinburgh.
- Watkins, T., D. J. Baird, and A. V. G. Betts  
1990 Qermiz Dere and the Neolithic of Northern Iraq. In *Préhistoire du Levant: processus de changement culturel - Hommages à Francis Hours*, O. Aurenche, M. C. Cauvin, and P. Sanlaville eds., 23-28. Paris: CNRS.
- Watkins, T. and S. Campbell  
1987 The Chronology of the Halaf Culture. In *Chronologies du Proche Orient*, O. Aurenche, J. Evin, and F. Hours eds., 427-64. Oxford: British Archaeological Reports.
- Watson, P. J.  
1983 The Halafian Culture: A Review and Synthesis. In *The Hilly Flanks: Essays on the Prehistory of Southwestern Asia Presented to Robert J. Braidwood*, T. C. Young, Jr., P.E.L. Smith, and P. Mortensen eds., 231-50. Chicago: Oriental Institute.

- Watts, Michael J.  
1992 Space for Everything (A Commentary). *Cultural Anthropology* 7:115-29.
- Willey, G.  
1991 Horizontal Integration and Regional Diversity: An Alternating Process in the Rise of Civilization. *American Anthropology* 56:197-215.
- Wolf, E.  
1990 Facing Power—Old Insights, New Questions. *American Anthropologist* 92:586-96.
- Yoffee, N.  
1986 Sfery vzaimodestviya v Mesopotamii. In *Drevnej Tsivilizatsii Vostoka*, V. M. Masson ed., 117-28. Tashkent: Publishing House "FAN" of the Uzbek SSR.
- 1988a The Collapse of Ancient Mesopotamian States and Civilization. In *The Collapse of Ancient States and Civilizations*, N. Yoffee and G. L. Cowgill eds., 44-68. Tucson: University of Arizona Press.
- 1988b Context and Authority in Early Mesopotamian Law. In *State Formation and Political Legitimacy*, J. Toland and R. Cohen eds., 95-113. New Brunswick: Transaction Press.
- 1988c Aspects of Mesopotamian Land Sales. *American Anthropologist* 90:119-30.
- 1989 "Chuzhezemtsy" v Mesopotamii. *Vestnik Drevnej Istorii*, no. 2:95-100.
- Zohary, D.  
1989 Domestication of the Southwest Asian Neolithic Crop Assemblage of Cereals, Pulses, and Flax: The Evidence from the Living Plants. In *Foraging and Farming: The Evolution of Plant Exploitation*, D. R. Harris and G. C. Hillman eds., 388-73. London: Unwin Hyman.
- Zohary, D. and M. Hopf  
1988 *Domestication of Plants in the Old World*. Oxford: Oxford University Press.
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