TRADE IN METALS IN THE THIRD MILLENNIUM: NORTHEASTERN SYRIA AND EASTERN ANATOLIA

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1. Introduction[1]

Since major excavations along the principal trade routes of the Euphrates and Khabur rivers in Syria as well as sites in eastern Anatolia have been conducted in the last few years, a renewed interest has focused on the sources and use of metals, especially copper and tin, and the local and international trade in these metals. Indeed, the manipulation of ores to produce strong metals (arsenical bronzes, tin bronzes and similar copper-based alloys) is one of the hallmarks of the early development of civilization in the ancient Near East. While undoubtedly experimentation in metallurgy started at a very early date in the Near East, the third millennium is the focal point for this early development since it is in this period that metallurgy came into prominence as a successful although primitive science. The ability of Syro-Mesopotamia to manufacture chemically complicated metal alloys into high-quality objects, whether for utilitarian use such as tools and weapons or for articles of status such as jewelry and toilet objects, presupposes the ability to obtain the raw materials through trade, since none of the ores is available locally. Some of the metal ores may have been obtained as a result of conquests and some through gifts. However, as has been pointed out by numerous authors, most of the exchange came through trade relations. The existence of high-quality metal objects then in third-millennium Syro-Mesopotamian cities is a bellwether mark for the sophistication of the urban culture in those cities.

The renewed interest in the evidence for metallurgy is coupled with the more readily available scientific tests of the metals and the publication of their results.[2]

[1] It is a privilege to dedicate this article to Dr. Adnan Bounni, who has contributed so much to our knowledge of ancient Syrian culture from the third millennium through the Palmyrenian period. His aid through the Department of Antiquities to numerous archaeological expeditions has allowed a much fuller picture of ancient Syria to emerge over the last twenty years. A portion of this paper was given in his presence at the Bern Conference on the Khabur region in December 1986; this paper is published here as it was given at the Rencontre in Istanbul, July 1987, with a few additions and some bibliographical sources added. There is a vast literature on Mesopotamian trade dealing with the third millennium, including one Rencontre on the subject of trade. The papers read at that Rencontre were edited by J. D. Hawkins as *Trade in the Ancient Near East*, London 1977, and reviewed by N. Yoffee, "Explaining Trade in Ancient Western Asia," *MANE* 2/2 (1981) 21-60.

[2] See N. H. Gale, Z.A. Stos-Gale & G.R. Gilmore, "Alloy Types and Copper Sources of Anatolian Copper Alloy Artifacts," *Anatolian Studies* 35 (1985) 143-173; Jak Yakar, "Regional and Local Schools

Overall surveys of the results also have made an important contribution to the availability of the data and their dissemination.[3]

This paper will concentrate on the metals trade routes from eastern Anatolia into northeastern Syria and southward along the major routes of the Khabur and the Euphrates and on the east-west routes across the Khabur triangle and down the Tigris. My interest in the third-millennium metals trade has been stimulated by our excavations at Mozan, located in the center of the Khabur triangle, along the Wadi Dara, just at the southern end of the Mardin pass.[4] New evidence for this trade is coming from our excavations, since four seasons of work there have yielded numerous examples of metal objects with stylistic connections both northward and to the south. Analysis of these objects, being undertaken at the present time, will hopefully contribute to our knowledge of the sources once used, and thus to trade patterns.[5]

The nature of the present evidence dictates that the conclusions indicated here are only preliminary, since much more data on sources and analysis of objects, as well as the discovery of important metallurgical processing areas, must come before a more certain picture can be drawn about manufacturing and trade patterns.

2. *Sources and Routes*

The investigation of metal sources in Anatolia has resulted in a great deal of new information. This new information comes from analysis of metals and materials from metal smelting found on archaeological sites, as well as from the discovery of mines and mining areas which were worked in antiquity.[6] The investigation of metal sources and analysis of materials from excavations in eastern Anatolia are

of Metalwork in Early Bronze Anatolia, Part I," *Anatolian Studies* 34 (1984) 59-86; "..... Part II," *Anatolian Studies* 35 (1985) 25-38; Ernst Pernicka, Thomas C. Seelinger et al., "Archaeometallurgische Untersuchungen in Nordwestanatolien," *Jahrbuch des Roemisch-Germanischen Zentralmuseums* 31 (1984) 533-599. Thomas Seelinger, Ernst Pernicka et al., "Archaeometallurgische Untersuchungen in Nord- und Ostanatolien," *Jahrbuch des Roemisch-Germanischen Zentralmuseums* 32 (1985) 597-659.

[3] James Muhly, *Copper and Tin*, New Haven 1973; P. R. S. Moorey, *Materials and Manufacture in Ancient Mesopotamia*, Oxford 1985; Prentiss S. de Jesus, *The Development of Prehistoric Mining and Metallurgy in Anatolia*, Oxford 1980; James Mellaart, "Archaeological Evidence for Trade and Trade Routes between Syria and Mesopotamia and Anatolia during the Early and the Beginning of the Middle Bronze Age," *Studi Eblaiti* 5 (1982) 15-32; Tamara Stech & Vincent C. Pigott, "The Metals Trade in Southwest Asia in the Third Millennium B. C.," *Iraq* 48 (1986) 39-64.

[4] The Mozan excavations have been supported by the Ambassador International Cultural Foundation and also recently by a grant from the National Endowment for the Humanities, RO-21543-87.

[5] The analysis of these metals is being undertaken under the direction of Dr. Pieter Meyers of the Los Angeles County Museum of Art with the help of Sharyn Crane.

[6] Most recently see K. Aslihan Yener & Hadi Ozbal, "Tin in the Turkish Taurus Mountains: the Bolkardag Mining District," *Antiquity* 61 (1987) 220-226.

important for this study, since the trade routes utilizing the northern Euphrates and Khabur river systems are the focus here.[7]

The principal copper source in eastern Anatolia is in the Ergani mining area north of modern Diyarbakir. The vast amounts of slag covering the area in the present day make determination of the extent of its ancient use almost impossible. It is thought that Çayönü, nearby, obtained its early copper ores from Ergani and that the latter area was still in use during the Old Assyrian period.[8] While no evidence will probably be forthcoming from Ergani itself, we can expect that the increased analysis of ancient metal objects and slag and their comparison with ores obtained at Ergani will help us pinpoint the periods of greatest use of this source.

In addition to Ergani, northeastern Anatolia along the Black Sea coast in the North Halys/Pontic region also contains a large area of copper and silver deposits.[9] These sources are, however, that much farther away from the Mesopotamian markets to the south. While stylistic connections can be made between third-millennium metal objects from Alaca Hüyük and the Transcaucasian area, it seems unlikely that the metals themselves were transported this far, given the availability of local sources.

In eastern Anatolia the major route southward passes the Ergani mining area, continuing into the north Syrian plain via the Mardin pass. Ancient, as well as modern, merchants traveled this route from Ergani to the vast Syrian plains around Mozan. This route is about 180 km long and goes across mountain valleys from the Ergani area, just south of the source of the Tigris at the Hazar Gölü, past Diyarbakir and Mardin. It traverses the relatively low rolling hills located south of the main Taurus mountains, which are for the most part around 500 meters high, although there is a higher portion north of Mardin rising to around 1000 meters (see Pl. 27). Traveling through this country today we see that the landscape just north of Mardin is very rocky and becomes more so on approaching the higher mountains to the north. The route is dotted with narrow valleys not suitable for large-scale farming; these valleys do not seem to have encouraged heavy occupation, as the mounds are sparse and small for the most part. No major geographical impediments barred the way along this route, as it is well watered and neither as hot in summer as the lowlands to the south nor as cold in winter as the higher mountains to the north. Thus it is the easiest route for travel from the ore deposits in eastern Anatolia to the south. In later times this route was taken by the Persian

[7] The analyses of the early Norşun slag and metals point up the difficulty of the research and the wide range of contacts the ancient smiths had.

[8] Muhly, *Copper and Tin*, pp. 199-208; de Jesus, *Mining and Metallurgy in Anatolia*, pp. 21-22 rightly points out that there is no ancient evidence for the exploitation of this area. For a review of all the Old Assyrian trading mechanisms see the standard works of Larsen (1967 and 1976), Veenhof (1972), and Garelli (1963). On the use of the Ergani mines by the Old Assyrians see Larsen 1967:172 (diagram) and 178; Larsen 1976:77-8, 91-2. See also Gardin & Garelli 1961, especially Carte 2.

[9] Muhly, *Copper and Tin*, pp. 199-208; see also Pernicka et al. 1984 and Seelinger et al. 1985.

Royal Road and in Roman times it was the preferred route through this area, as shown by Peutinger's map. Once on the plain at Mozan merchants could go either southward along the Khabur, reaching the Euphrates near Qraya and Terqa, or continue on the major east-west route, which followed the Khabur triangle either to the Balikh and Euphrates or in the other direction to the Tigris.

3. The Importance of Mozan in the Metals Trade

The city of Mozan is located in the center of the Khabur triangle about 20 km southeast of the Turkish city of Mardin. As such it is then at the southern exit of the main pass through the Taurus mountains to the eastern part of Syria. The Mardin pass is indeed the most important pass from eastern Anatolia into Syro-Mesopotamia, since the Tigris route farther east involves traversing a winding and steep route. Both in the third-millennium levels of the temple we are excavating on top of the mound and in the earlier third-millennium tombs in the outer city, a large number of metal objects have been uncovered (Pl. 28a). One of these objects is a scraper with an asymmetrical incurving spiral on one side (Pl. 28b). This type of asymmetrical incurving spiral is characteristic for relief decorations on Early Transcaucasian pottery from Georgia and Armenia. This type of evidence along with the Early Transcaucasian pottery found at Mozan gives a good indication of the relations of Mozan with the north.

4. Reconstruction of Trade Patterns in the Third Millennium

For the reconstruction of the trade in metals in the third millennium we must also look at other factors to the north of Syro-Mesopotamia in the metal-rich regions of eastern Anatolia. Early in the third millennium a homogeneous village and small-town culture was established in this region. Originally that culture had come from the equally metal-bearing regions of the Caucasus, namely Georgia and Armenia. This area has been given various names in the literature, and I prefer to stress its great expansion on the northern periphery of the region on which we are concentrating by calling it the Outer Fertile Crescent. The importance of this culture for our purposes here lies in both its geographical spread and its patterns of internal cohesion. Given its spread from northwestern Iran across eastern Anatolia and down into inner Syria and Palestine, it is obvious why this culture can be characterized as relating in an inverse pattern to the geographical coherence called the Fertile Crescent. Therefore none of the settlements of this culture is within the area of the major urban cultures of the third millennium. While the major cultural elements are very similar throughout the area, some distribution patterns and

cultural elements vary from region to region. This is especially true for the region of inland Syria and Palestine. In these regions it is clear that the influence was more superficial than elsewhere. It can be seen that the pottery types, and the wares themselves, while superficially similar to the northeastern varieties, are indigenous to these southern regions.[10]

The trade patterns of Syro-Mesopotamia and Anatolia in the third millennium fall into place as part of a much longer history of trade relations in this region. Starting with the Halaf period we can see that raw materials, lacking in the south but abundant in the north, were soon recognized and exploited in the north and then traded to the south.[11] In the case of obsidian the technology for its exploitation and later for fashioning implements was not difficult and needed a minimum of technical information in the hands of the craftsman. In the Halaf period obsidian was traded both internally within Anatolia and to its southern neighbors, especially via the Khabur and Euphrates rivers.

Less information is known about the procurement of raw materials in the Ubaid period, but by the Uruk period we can see a very active sequence of events, in which southern cultural patterns are established as far north as Qraya (near the confluence of the Khabur and Euphrates rivers) and at sites like Habuba Kabira and Jebel Aruda along the Syrian Euphrates. The major cultural indicators of architecture, ceramics, and seals from these sites are so similar to those from the south that it is all but impossible to reconstruct any other picture than one of substantial southern incursions in these areas. At Qraya, for instance, while the excavations have not thus far exposed any significant architectural remains, the pottery and seal impressions found in an ancient dump have close parallels with those from the south. Recently A. Palmieri has reviewed the evidence for the internal relations during this period in eastern Anatolia and its extension to the south.[12] She integrates the evidence of Malatya with the Uruk evidence in the south and points out the similarities and differences between the Malatya evidence and that to the south.[13] While Malatya undoubtedly had strong influences from the Uruk culture, we can see an even stronger Uruk influence at sites on the Euphrates like Habuba Kabira or even at the small site of Qraya.

[10] For a summary of this third-millennium evidence see M. Kelly-Buccellati, "The Outer Fertile Crescent Culture: North-Eastern Connections of Syria and Palestine in the Third Millennium B.C.," *Ugarit-Forschungen* 11 (1979) 413-430.

[11] At Bouqras near the confluence of the Khabur and the Euphrates rivers, an analysis of three of the excavation squares shows that 12% of the chipped stone is obsidian, P. A. Akkermans et al., "Bouqras Revisited: Preliminary Report of a Project in Eastern Syria," *Proceedings of the Prehistoric Society* 49 (1983) 349-51.

[12] Alba Palmieri, "Eastern Anatolia and Early Mesopotamian Urbanization: Remarks on Changing Relations," *Studi di Paletnologia in Onore di Salvatore M. Puglisi* (Rome 1985) 191-213.

[13] Alba Palmieri & Marcella Frangipane, "Assetto Redistributivo di una Società Protourbana della Fine del IV Millennio," *Dialoghi di Archeologia* 1 (1986) 35-44.

By the Early Dynastic period new spheres of interest had been consolidated and solidified. During this period we no longer have what appeared to be colonies in the Uruk period or even sites with substantial Uruk influence such as Malatya and Tepecik. Rather these northern areas are free of such massive southern influence and indeed participate in only some aspects of southern culture, and even this in a very reduced and transformed fashion. The large number of door sealings from Mozan are a good example of this (Pl. 29a). The idea of a door sealing made of clay to seal a storeroom door appears to be a southern one; the clay is put around a peg tied with rope and pressed against the flat portion of the wooden door (Pl. 29b-c). Some aspects of the iconography have southern models: nevertheless, there are fundamental changes in the way these models are looked at and executed. They therefore are the result of a northern tradition and can no longer be considered as having such a profound relationship with their southern counterparts.[14] The bureaucratic function of the use of door sealings may have been the same, however, in the north as in the south, since a number of them have been found in an ED III deposit at Mozan and examples have come from Tell Chuera.[15]

Southern influence in the Early Dynastic period extended north only as far as the mountains in Anatolia and not into them as in the Uruk period. In Anatolia there is a decline of large sites, such as for example Kurban Hüyük,[16] during this period due to the consolidation of the Early Transcaucasian culture in the eastern Anatolian river valleys and its effect on the Karababa basin. This culture, extending from its original homeland in the Caucasian region of Georgia and Armenia, came to control resources and trade routes in all of eastern Anatolia, including then its sources and traditional trade routes for metals.

Trade to the south did continue during much of the third millennium with the exchange of mutually identifiable material goods on both sides. Northerners were extracting metals from their metal sources but bringing them only as far south as the first cities below the mountains in the Syrian plains. The new excavations of Mozan at the southern exit of the Tur Abdin mountains below Mardin have uncovered many metal objects dating to the third millennium, as indicated above; these certainly show a lively commerce in metals during the period. Since there is no similar evidence for a thriving metals industry in the eastern Anatolian highlands, it can only be concluded that the manufacture of metal objects on a large scale was situated in the lowlands, probably starting with the large third-millennium cities in the Khabur basin.

[14] G. Buccellati & M. Kelly-Buccellati, *Mozan 1* (Malibu 1988) 64-78.

[15] A. Moortgat & U. Moortgat-Correns, *Tell Chuera in Nordost-Syrien: Vorläufiger Bericht über die Achte Grabungskampagne 1976* (Berlin 1978) Abb. 6.

[16] G. Algaze, "Kurban Hüyük and the Chalcolithic Period in the Northwest Mesopotamian Periphery: A Preliminary Assessment," Finkbeiner & Röllig eds., *Gamdat Nasr: Period or Regional Style?*, pp. 283-5. There he points out that the parallels for Kurban Hüyük pottery in this period are for the most part with sites in the Anatolian highlands.

Evidence for part of the pattern which reconstructs the ores being brought from the mountains by the Early Transcaucasians can be seen in the fact that in the middle of the third millennium Early Transcaucasian pottery with its distinctive gray, black and sometimes red burnished ware is found throughout eastern Anatolia, as well as Armenia and Georgia, as the dominant type of pottery.[17] At the same time we only rarely find this type of pottery south of the Taurus mountains; there is some from Tell Chuera and some from Mozan.[18] In Meijer's survey of the region in the extreme northeastern portion of Syria he reports little of this pottery, the one exception being on Tell Farfara.[19] We have evidence of the Tigris trade route being used in the third millennium from the spread of Metallic ware from northeastern Syria to the south, which will be discussed below.[20] However, the fact that Early Transcaucasian pottery is not found to any great extent in northeastern Syria is significant for our reconstruction of trade patterns, as it is instead found in great amounts in inland Syria and down into Palestine. We can only conclude that some impediment to trade coming from eastern Anatolia and going southward must have existed in north-central and northeastern Syria. That is, along the traditional trade routes connecting the north with the south and along the major waterways of the Euphrates, Balikh, Khabur and Tigris rivers some impediment existed south of the Taurus. Further to the east we do see Early Transcaucasian pottery in large amounts again along the route from Anatolia to northwestern Iran which passes the Lake Urmia area. Therefore the pattern of the spread of the Early Transcaucasian pottery all along the Outer Fertile Crescent, but not to the south except along the periphery, is not accidental. Rather, it most likely is the result of the action of the strong third-millennium cities such as Mozan, in the center of this region, which prohibited direct trade along the traditional trade routes to the south.

These cities then were the gateway cities to the south and controlled the trade in metals, and presumably other goods, southward to the thriving, but materials-poor Sumerian cities. Major cities in this area have always been concentrated in the plain, rather than being located in the mountains, for obvious reasons: conditions were less harsh on the plain and activities such as agriculture were possible on a large scale because of the plain's unique geographical position, with its rich soil and abundant water both from the surrounding mountains draining into the plain and

[17] At Korucutepe in the Keban region of Anatolia this pottery is found as predominant in all the Early Bronze levels; statistics are given in M. Kelly-Buccellati, "The Excavations at Korucutepe, Turkey, 1968-70: Preliminary Report, Part III: Statistical Description of Significant Groups of Pottery," *JNES* 32 (1973) 434-439; see also "Part V: The Early Bronze Age Pottery and Its Affinities," *JNES* 33 (1974) 44-54. For the Korucutepe material statistical testing was also done on distributional patterns of the Early Transcaucasian ware and its association with rooms and open areas, see M. Kelly-Buccellati & E. Elster, "Statistics in Archaeology and Its Application to Ancient Near Eastern Data," G. Buccellati ed., *Gelb Volume: Approaches to the Study of the Ancient Near East* (Rome 1973) 195-211, especially 202-209.

[18] Buccellati & Kelly-Buccellati, *Mozan 1*, pp. 62-64.

[19] Diederik J. W. Meijer, *A Survey in Northeastern Syria* (Istanbul 1986) 33, 6.3.1.

[20] Hartmut Kühne, *Die Keramik vom Tell Chuera* (Berlin 1976) 51-56 and map 1.

from sufficient rainfall. This massive economic foundation, combining trade and agriculture, is the basis on which these cities came into existence and gained the prosperity which we see from the architecture, sculpture and metals at such third-millennium cities as Chuera, Mozan and Brak (at Brak the trade route leaves the Khabur region and enters the Tigris area via the Jebel Sinjar).

Trade in this region was, however, not only a one-way affair. Some goods traveled north from the area of north Syria and even from more southern sites. Recently Tahsin Özgüç has reviewed the evidence for third-millennium connections between Kültepe and northern Syria. In his article he singles out some small objects probably imported from as far south as Ur and concludes "...easily transported small objects were imported into Anatolia from the Early Dynastic III and Akkadian periods on."[21] Another prominent source for our information on this trade northward is the pattern of the spread of Metallic ware. As is clear from pottery found in the Mozan graves and elsewhere,[22] Metallic ware originated in the vast plains of northern Syria and was transported southward at least as far as Terqa and Mari along the Khabur/Euphrates route.[23] To the north we find it in the Keban sites, as well as in the Malatya region and now more of it is published from Kültepe.[24] All of these northern sites are part of a trading network serving the metals trade, but which must also have transported other items, as it did later in the Old Assyrian period. That we have not found this ware on sites along the Ergani-Mozan route is, in my opinion, only a function of the fact that this area is very poorly known and no sites along this route have been excavated.

The exact dates for this third-millennium trade are as yet difficult to determine. Part of this is due to the fact that only one text has been found in this area and that we do not know the parameters for the duration of three major wares existing in northern Syria and eastern Anatolia during this period: Ninevite V incised ware, Metallic ware, and Early Transcaucasian ware. This latter is the best documented as far as eastern Anatolia is concerned, because it is well stratified at a number of sites. The problem with this ware from the viewpoint of the chronological situation is that it is found so infrequently in the plains. The contents of one tomb from the outer city third-millennium cemetery at Mozan can help to clarify somewhat the end of Ninevite V incised ware and the beginning of Metallic ware. In this tomb (O b 1) we found an assemblage of over one hundred vessels. These included large pointed-base Ninevite V incised bowls with grooves cut into them similar to those

[21] Tahsin Özgüç, "New Observations on the Relationship of Kültepe with Southeast Anatolia and North Syria during the Third Millennium B.C.," Canby et al. eds., *Ancient Anatolia: Aspects of Change and Cultural Development* (Madison, Wisconsin 1986) 42.

[22] These graves will be published by Judith Thompson-Miragliuolo in *Mozan 2*.

[23] This evidence has been conveniently summarized by Kühne (1976) 33-72.

[24] See Özgüç 1986.

from Ailun[25] and considered late in the Ninevite V sequence.[26] Also in this tomb were a number of Metallic ware conical cups which are thick, poorly made, and streaked blue-gray and orange due to firing problems not found later. These obviously are an early variety of Metallic ware. The third major type of pottery from the tomb was a number of painted stands of Scarlet ware. Moortgat had already published a Scarlet ware stand from Tell Chuera.[27] In the Mozan tomb also were a number of metal objects discussed above. The date of the tomb then must be at the end of the Ninevite V incised sequence and the beginning of the Metallic ware sequence, both of which overlap with the incursion of Scarlet ware into northeastern Syria. This probably took place somewhere at the beginning of the Early Dynastic II period. Whether or not this trade in metals and other goods was extensively carried on as early as the ED I period cannot as yet be discerned from the archaeological record, since few sites in the northern portion of Syria have been excavated for this period.[28] It appears from the historical record as well as from the archaeological record that the trade flourished into the Akkadian period and may even have lasted into the Ur III period. Its cessation was apparently one of the factors in the decision during the Ur III period to obtain metals from the south.[29]

5. *Conclusions*

In Syro-Mesopotamia interregional exchange networks developed early; by the fifth millennium obsidian was traded along the major trade routes from Anatolia southward. This long-distance exchange was stimulated in the north by the vast differentiation in the environment from the mountainous, resource-rich areas of eastern Anatolia via the vast, flat, rain-fed, fertile plains of northeastern Syria to the alluvial, irrigated plains of the south. This differentiated, but complementary, distribution of resources facilitated the development of an interdependent long-distance trading network.

[25] Anton Moortgat, *Archaeologische Forschungen der Max Freiherr von Oppenheim-Stiftung im nordlichen Mesopotamien 1956* (Köln 1959) Abb. 11, 12.

[26] G.M. Schwartz, "The Ninevite V Period and Current Research," *Paléorient* 11 (1985) 53-70.

[27] Moortgat & Moortgat-Correns 1976, Abb. 28.

[28] G.M. Schwartz, *From Prehistory to History on the Habur Plains: The Operation 1 Ceramic Periodization from Tell Leilan*, Ann Arbor 1982; same, *Ceramic Periodization from Tell Leilan Operation 1*, Harvey Weiss ed., Yale Tell Leilan Research 1, New Haven: Yale University Press, 1988.

[29] Henri Limet, *Le Travail de Métal au Pays de Sumer* (Paris 1960) 85-99; here he indicates that a great deal of copper was imported into Sumerian cities from Dilmun, Magan and Meluhha, all located south of Sumer. In the east Tigris mountainous area Kimash is mentioned as a source of copper for the merchants. Hahhum, which he locates probably in northern Syria (p. 93), is a source of gold.

The most important sites in the trade network are those at crucial points where natural irregularities meet, such as an uneven distribution of natural resources or variable agricultural productivity. Barriers to communication and transportation such as exits/entrances of mountain passes, crossing points of rivers or tributaries, as well as major springs constitute natural gateway areas. Here the control of trade flow is easiest, because these sites serve as gateways out of and into distinct environmental regions and link more restrictive trading networks (in our case those in the mountainous regions of northeastern Anatolia) with wider trading networks located along natural corridors of communication (such as those which traditionally crossed the north Syrian plains). Gateway cities are defined as developing in "contact zones between areas of differing intensities or types of production, along or near economic shear lines."[30] Gateways are connected with long-distance trade and are therefore located at points where long-distance transportation is easily available and at "strategic locales for controlling the flow of merchandise."[31] In the present context Mozan can be seen as having a geographical advantage in that it was situated at one of the main river crossings on the east/west trade route and had, as well, access to easy transportation to more southern cities via the Khabur/Euphrates water route. The economic "shear lines" can also be seen at Mozan since it is located at a point where the environment changes radically from the fertile north Syrian plains to the mountainous uplands of the southern Taurus; this strong advantage as to site location is emphasized by the fact that Mozan is situated at the outlet of the major pass into the eastern Taurus at Mardin.

As gateway cities generally grow in response to increased trade, the demand for raw materials, especially metals, by the newly emerging cities in the south can be correlated with the growth of cities in the north toward the beginning of the third millennium. In the north we witness at this time the establishment of cultural links between what appear to be predominantly Hurrian (or Proto-Hurrian) populations in northeastern Syria and eastern Anatolia. The flow of goods facilitated by these interregional contacts and stimulated by local and long-distance demands became so complex that mechanisms of resource pooling and redistribution of goods had to be centered in large population areas where goods could be controlled and manipulated on a larger scale. At specific environmentally advantageous points new settlements quickly grew into powerful gateway cities such as Mozan and Chuera, with Brak continuing to control trade in the eastern portion of the Khabur triangle. The door sealings excavated at Mozan in a burnt deposit which contained a large number of pottery vessels and sherds (all part of a very limited number of vessel types and shapes) certainly indicate the presence of large storerooms, serving the

[30] A. F. Burghardt, "A Hypothesis About Gateway Cities," *Annals of the Association of American Geographers* 61 (1971) 270.

[31] Kenneth G. Hirth, "Interregional Trade and the Formation of Prehistoric Gateway Communities," *American Antiquity* 43 (1978) 37.

redistributive function of the city. Iconographic as well as ceramic connections with eastern Anatolia also point to important cultural links beyond those which can presently be seen in the archaeological record.

While interregional trade was not the only factor in the development of gateway cities in the Khabur region, it certainly was a key factor in the acquisition of economic power beyond what was available from a position as a central place within a more restricted, local environment in the north Syro-Mesopotamian plains.

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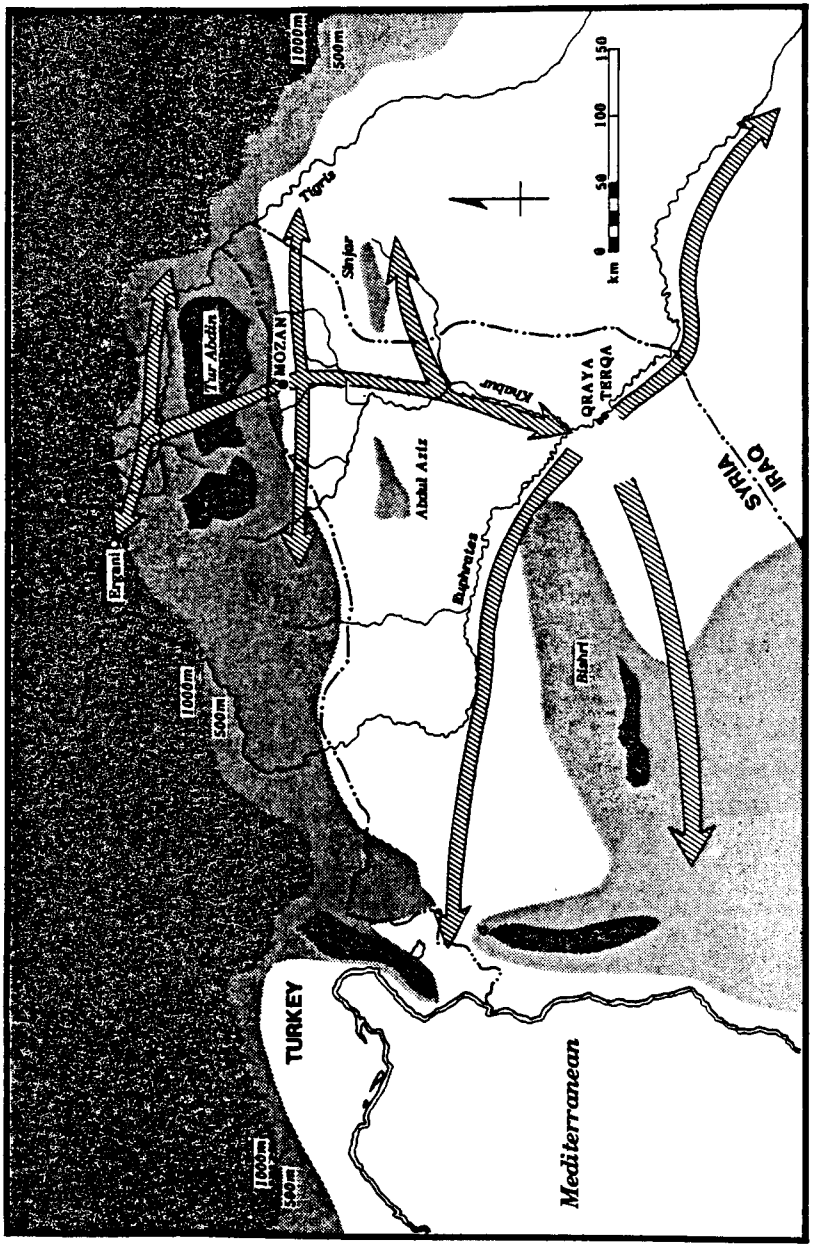
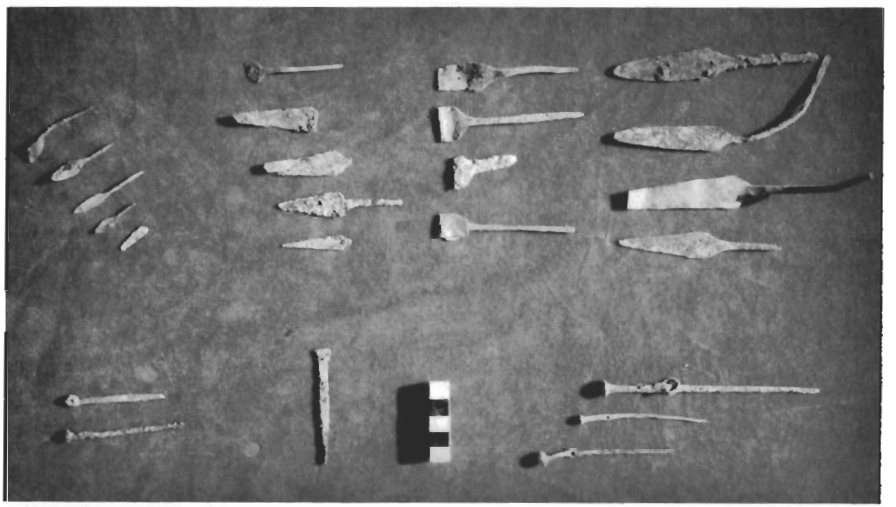
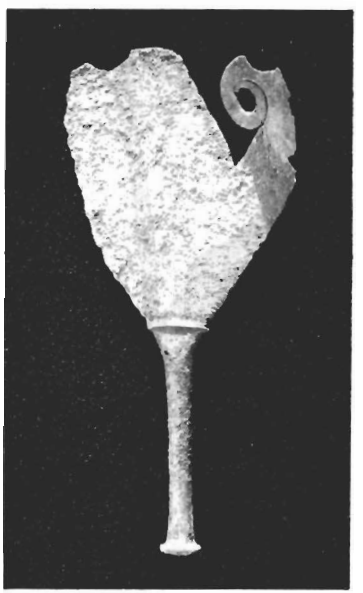


Plate 27. Major trade routes in northeastern Syria and southeastern Anatolia.

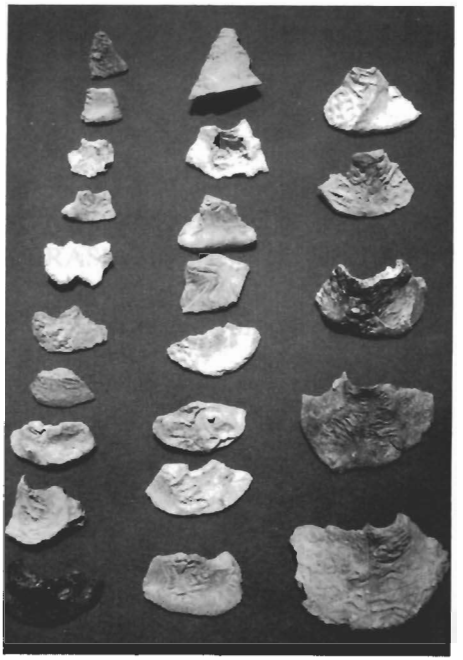


a



b

Plate 28a. Third-millennium copper alloy pins, spear heads and spatulas from the Mozan excavations. b. Early third-millennium copper alloy scraper from a tomb (O b 1) in the outer city (MZ V 3126 N I).



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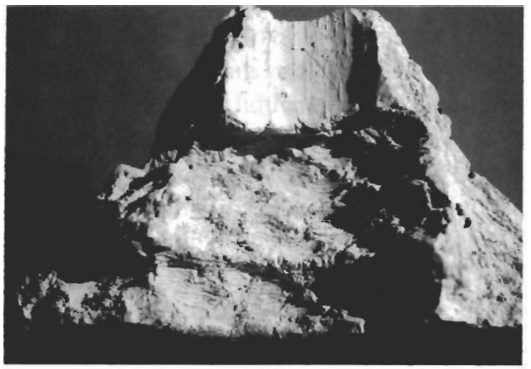

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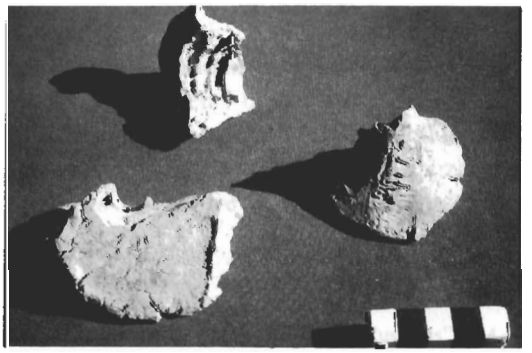

c

Plate 29a. Corpus of Mozan door sealings from the burnt deposit near the city wall (K 1).
b. Detail of the interior of a Mozan door sealing showing the rope and peg impression.
c. Three views of Mozan door sealings.

RESURRECTING THE PAST

A Joint Tribute to Adnan Bounni

edited by

PAOLO MATTHIAE
MAURITS VAN LOON and
HARVEY WEISS

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