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Antiguo Oriente: Cuadernos del Centro de Estudios de
Historia del Antiguo Oriente Vol. 7, 2009

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Cómo citar el documento:

Milevski, Ianir. "Local exchange in the southern levant during the early bronze age: a political economy viewpoint". *Antiguo Oriente: Cuadernos del Centro de Estudios de Historia del Antiguo Oriente* 7 (2009).

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(Se recomienda indicar al finalizar la cita bibliográfica la fecha de consulta entre corchetes. Ej: [consulta: 19 de agosto, 2010]).

LOCAL EXCHANGE IN THE SOUTHERN LEVANT DURING THE EARLY BRONZE AGE: A POLITICAL ECONOMY VIEWPOINT*

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Summary: Local Exchange in the Southern Levant During the Early Bronze Age: A Political Economy Viewpoint

Trade and relations between the southern Levant and other regions of the Near East (mainly Egypt) during the Early Bronze Age (ca. 3,600–2,300 BC) have been the subject of many studies. Research concerning the exchange of local commodities was almost ignored or was discussed in parochial studies, focusing on specific archaeological finds. It is the intention of this paper to present the results of recent research of the exchange of commodities provided by archaeological data from excavations in the Southern Levant with regard to economic theories on the exchange-value of goods and exchange networks. Conclusions regarding the type of society and the forms of government in the Southern Levant during the Early Bronze Age are also presented.

Keywords: Exchange – Political Economy – Early Bronze Age – Southern Levant

Resumen: Intercambio local in the Levante meridional durante la Edad del Bronce Temprano: Una Mirada político-económica

El comercio y las relaciones entre el Levante meridional y otras regiones del Cercano Oriente (principalmente Egipto) durante la Edad del Bronce Temprano (ca. 3,600–2,300 a.C.) han sido el tema de mucho estudios. La investigación con respecto al intercambio de materias primas locales fue casi ignorada o discutida en los estudios locales, enfocándose en hallazgos arqueológicos específicos. Es la intención de este artículo presentar los resultados de investigaciones recientes sobre el intercambio de materias primas provistos por los datos arqueológicos de excavaciones en el Levante meridional con respecto a las teorías económicas sobre el valor del intercambio de bienes y las redes de intercambio. Se presentan también las conclusiones con respecto

* Article received: February 15th 2008; approved: July 18th 2008.

al tipo de sociedad y las formas de gobierno en el Levante meridional durante la Edad del Bronce Temprano.

Palabras clave: intercambio – Economía política – Edad del Bronce Temprano – Levante meridional

INTRODUCTION

Exchange is the principal means by which goods circulate and are disseminated between early societies. Exchange, sometimes called barter, refers to a particular type of interchange of commodities in which no money or other medium of exchange is used, although nominal exchange-values existed.

We utilize the term “exchange” in a much wider sense that includes all inter-site interchanges of commodities, including intermediate phases, between production and consumption. Numerous earlier studies have dealt with the subject in diverse regions and from a comprehensive theoretical point of view. However, studies dealing with this subject in the southern Levant have hitherto tended to be limited. They either concentrated on aspects related to particular finds or were restricted to very localized regions.

International connections or contacts between the southern Levant and neighboring regions, such as Egypt, are related to trade and exchange and have been dealt with extensively by scholars for the Early Bronze (hereafter, EB) Age. However, localized exchange within the southern Levant, understood as a system of circulation of goods between sites and local regions (Figure 1), is a subject that has not been fully addressed for this period, even though it has been the subject of study for later periods. This research attempts to fill this gap in the understanding by providing a synthetic study for the region during the entire EB Age (Table 1).

Period	Years B.C.
EB IA	3,600–3,300
EB IB	3,300–2,950
EB II	2,950–2,600
EB III	2,600–2,300

Table 1.

Chronology of the Early Bronze Age in the southern Levant.

The approach employed in this research was to study the overall process of exchange of commodities, including production and circulation, in an interrelated and dialectical mode. Towards that end, different commodities within the EB were identified and then defined by site, region and period. These commodities included such items as recognizable groups of pottery (i.e. wares), flint and other stone tools, shells, raw materials, and some additional items. They were first studied as specific cases according to site, region and period within the EB Age. They were then considered in terms of socio-economic relations, i.e. exchange patterns evident from them, after which a comprehensive picture for the entire period under discussion was reconstructed.

Theoretical approaches to exchange in prehistory and this writer's methodological approach to the theory of value and commodities exchange presupposes an understanding of finds as commodities according to traditional archaeological patterning, e.g. pottery, flint tools, groundstone tools, metals, archaeobotanical data, fauna, and minerals. A method borrowed from the Political Economy (and mainly Marx's *Critique to Political Economy*) and the Theory of Value¹ has been adopted within the general archaeological framework developed by V. Gordon Childe.² This work has also adopted elements from models on archaeological exchange developed by Renfrew³ and Plog⁴.

EXCHANGE NETWORKS

Interpreting patterns of exchange through data from the archaeological record can, at least for certain commodities, be extremely difficult and the results somewhat tentative because of the limitations of the available data.

By investigating the exchange of commodities during the EB Age some important observations may be made. First of all, it may be stated that no centralized or unified network of exchange existed; rather, there were several lines or paths of circulation that at times converged into approaching networks, some of which eventually displayed evidence of regional centralization. The separation of networks is sometimes clearly observable, as that between the north and south-central regions, where little interaction or mutual exchange

¹ Marx 1970; 1993; Rubin 1972.

² Childe 1942.

³ Renfrew 1969; 1975; 1977.

⁴ Plog 1977.

is noted. However, some networks actually linked different regions, such as those of the Hill Country with the Shephelah, and those of the Southern Coastal Plain with the Shephelah, so that in different time spans and in associations with different commodities, intercourse between different regions did take place.

Economic aspects of these networks are notable in discernable patterns (Figure 2). They indicate that each branch of production had a defined network of distribution, sometimes associated with related commodities as in the case of Canaanite blades⁵ and bitumen (originating from the Dead Sea)⁶ in the center and southern regions (see further below).⁷ Other patterns suggest sympathetic networks for more than one commodity, such as in the case of Arkosic holmouth ceramic vessels (originating in the Wadi Feinan area)⁸ and metal objects from the northern Negev during EB II.⁹

Distribution of Commodities

In particular, an analysis of the networks of pottery distribution showed well-defined patterns. The outstanding characteristic of the pottery distribution networks in most cases is the existence of concentric areas of circulation radiating from core areas where it appears that pottery was produced. In addition, there are some cases of pottery exchange networks in which the distribution of specialized wares remained within a very restricted zone. Such patterns shifted over time; thus, all chronological parameters are important in understanding the networks of pottery exchange during the EB Age. In general, there appears to be a major trend from a general decentralization of production during EB IA (e.g. Gray Burnished Ware)¹⁰ towards regional

⁵ Rosen 1997: 46–60.

⁶ Milevski, Marder and Goring-Morris 2002.

⁷ A similar observation may be made concerning the appearance of Nilotic shells in association with Egyptian pottery. However, the subject on the exchange with external regions is beyond the scope of this study.

⁸ Porat 1989; Adams 1999.

⁹ Genz 2001.

¹⁰ Wright 1958; Yannai 1999; Goren and Zuckermann 2000.

centralization in EB II (e.g. Metallic Ware),¹¹ followed by a return to less centralization in EB III (e.g. Khirbet Kerak Ware).¹²

The exchange of Canaanean blades similarly indicates some type of centralization dominated by regional centers (e.g. Har-Haruvim, Gat Guvrin, Tel Halif, Fatzael?) that distributed blades in relatively closed networks.¹³ However, the distribution of Canaanean blades differs from that of pottery circulation because it involved several stages through which objects passed between the workshop of the knapper and the end user, who was the agricultural worker who received the blades and sickles (i.e. retouched tools). This type of network circulation could also be relevant for metal objects that may have passed through a number of stations. Presumably they derived from copper sources in the Feinan area¹⁴ and passed through metallurgical workshops before finding their way to the end users. There is, however, a major difference in the locales of these networks. Metal sources only seem to be in the Eastern Aravah, while Canaanean flint segments originated in numerous locales in the center and northern regions. Such examples differ considerably from the pattern suggested by the distribution of tabular scrapers. These specialized tools appear to have been exchanged over long distances from supposed centers of production. Most notably, scrapers gradually decrease in appearance at sites from south to north as the distance from the sources of material is larger.

Simple networks, such as those concerning distribution of raw materials (bitumen, carnelian) and shells were characterized by more direct patterns of exchange. Of course they were also subject to chronological variations. Such commodities of diminutive size and/or small quantity derived from specialized sources and had relatively simple, more or less linear, distribution networks. It is likely that they represent some kind of “down-the-line” model of exchange¹⁵ by which they traveled through successive settlements and regions by subsequent exchanges.

It is difficult to estimate the relative abundance or lack of exchanged commodities per network or region since quantitative data is available in only a few instances. Generally this information is confined to objects such as flint and zooarchaeological and archaeobotanical remains. Nevertheless, attempts

¹¹ Greenberg and Porat 1996.

¹² Esse and Hopke 1986; Ziv-Esudri, Cohen-Weinberger and Zuckerman 2007.

¹³ Perrot 1961; Futato 1996; Shimelmitz, Barkai and Gopher 2000.

¹⁴ Adams 1999; Genz 2001.

¹⁵ Renfrew 1975.

have been made to calculate parameters of absolute or relative abundance of given commodities¹⁶ as a function of distance from sources, weights or quantities of artifacts or raw materials. Such attempts allow for estimates, which may then be further factored with estimates relating volumes of excavated areas to quantities or frequencies of specific commodities.

This work has attempted to take into account the problems of limited data noted above and then consider distances from the sources or between locales of exchange, not just in linear terms, but also by taking into account topographical features that add to the expenditure of energy and costs. These social factors (i.e. energy expended and costs in terms of outlay of resources) were likely to affect entire communities to the extent that their inhabitants were involved in production and exchange of a commodity.¹⁷ Such economically oriented activity would have direct effects on these early societies of the EB Age.

With all the above considerations in mind, it is possible, at least to a limited extent, to address questions on the quantities of different commodities locally exchanged during the EB Age. It is assumed that, in all cases, abundance of pottery types defines core areas, while lesser quantities in more distant zones indicate pottery distributed from core areas. This interpretation seems to be borne out by observations from the archaeological network. In general all morphological types of particular wares or groups of wares tended to be found within core areas, while few variants seemed to have made their way to more distant locales, and those that did were generally the smallest and easiest to transport.

Basalt and ground stone tools seem to be most evenly distributed and they were relatively abundant in relation to distance and weight.¹⁸ Canaanite blades had a restricted area of distribution although distances from the flint sources were not great. By contrast, most metal objects were concentrated in the south-central regions, close to the sources in the Wadi Feinan area, although a few were found in northernmost sites such as Rosh Haniqra and Tel Dan.

¹⁶ Earle and Ericson 1977: 6.

¹⁷ Petréquin and Petréquin 2000: 364–366.

¹⁸ Milevski 2008.

Directionality and Symmetry

Directionality of the networks (i.e. the direction in which commodities flow) is sometimes difficult to establish from the archaeological record. When it could be observed it indicated a diversity of patterns that not necessarily oppose one another, although sometimes it is difficult to follow the circulation outlines of some commodities. The Huleh Valley, the Jordan Valley, the Aravah, and the Central and Southern Coastal Plains acted as the major south Levantine conduits for exchange along a north-south axis in accordance with their geographic parameters. Galilee, the Jezreel Valley, the Central Hill Country, and the Shephelah tended to be regions in which east-west tracks were observed. The Negev and southern regions appear to have fostered exchanged networks showing mixed directionality. In particular cases such as those involving exchange of Canaanite blades, as far as may be understood, there are multidirectional networks, dependent on location of sources, sites and the extent of particular areas in which exchange took place.

Symmetry and directionality of exchange networks during the EB Age show unequal patterns (Figure 3). Exchange networks at this time show unequal patterns that were sometimes symmetrical (i.e. bi-directional with commodities going back and forth between regions) and sometime uni-directional. Several examples indicate the types of patterns. Notably, pottery of northern origin (i.e. Gray Burnished Ware, Metallic Ware and Khirbet Kerak Ware) have been found at southern sites, while virtually no southern pottery (e.g. the Negev wares) have been found in northern sites. Utilization of bitumen for hafting flint tools is well known at south-central sites, and significantly, is unknown at sites in the north.¹⁹ Prestige or luxury items such as shells have a long range of distribution and are found in both southern and northern regions, but these goods do not seem to affect the exchange networks. Flint tabular scrapers that most probably originated in southern areas were brought in small amounts to sites in the north. Although poorly represented there, they provide evidence that some of those objects could be exchanged over long distances. It can also be suggested that these scrapers found their way through networks that were primarily devoted to other commodities.

The only areas that show a degree of symmetry in the circulation of goods are the Jordan Valley, and to a lesser degree, the Aravah. Patterns of exchange in the Jordan Valley underwent change over time with most circulation of commodities occurring during EB I and EB III. The Central and Southern Coastal Plains also illustrate a certain degree of symmetry,

¹⁹Milevski, Marder and Goring-Morris 2002.

having their connections with the eastern areas of the Shephelah, the central Hill country and the northern Negev. In the cases of the Jordan Valley and the Coastal Plain, there is a predominance of northern products, indicating much stronger links with that region of the country rather than with the south. Lack of symmetry within exchange networks and between others is understood to be the most significant factor for explaining why no centralized or unified network of exchange ever existed in the EB Age of the Southern Levant.

The Galilee, the Huleh Valley and the Jezreel Valley exhibit decentralized exchange of pottery during the EB IA. Judging from the distribution pattern of types (i.e. families) of Gray Burnished Ware exchange was not symmetrical. Main centers of production of Gray Burnished Ware (Family I) appear to have been in the Jezreel Valley and Lower Galilee, while other sub-types were apparently manufactured in centers in Western Galilee and the Huleh Valley. Also asymmetrical are network relations between north and south during EB II. Metallic Ware arrived at southern sites but southern pottery groups of the Negev did not reach the central and northern regions (with the exception of 'Ai). Furthermore there is no correspondence between the appearance of Metallic Ware and the Tel Aphek bowls,²⁰ although both groups are notable for having common forms (i.e. small carinated bowls).

It must be emphasized that decentralization and diversity over the varied areas of exchange of the Southern Levant during EB are the main characteristics of exchange networks that could be observed. Indeed, the Southern Levant may best be characterized in regards to exchange as a mosaic of regions loosely held together with skeins of far-flung networks that, at certain peak periods of activity, showed evidence of regional centralization. Plog²¹ has defined similar phenomena that may also be used to describe the southern Levant in EB I (as was already by Joffe).²²

PATTERNS OF EXCHANGE DURING THE EARLY BRONZE AGE

Early Bronze Age I

In general, the EB I presents the most variegated forms and numbers of networks. EB I exchange networks are the most numerous and varied for the entire EB Age. Some appear in the very beginning of the EB IA. They

²⁰ Beck 1985.

²¹ Plog 1977.

²² Joffe 1993: 53.

include a system responsible for distribution of tabular scrapers (probably an outgrowth of an earlier Chalcolithic network), one for dispersion of Gray Burnished Ware, one for shell distribution (including Nilotic *Chambardia*) and another (albeit to a lesser extent) for distribution of metal objects involving centers at Wadi Feinan and a workshop/center at Afridar.²³ The distribution of basalt vessels and tools shows some degree of continuity from Chalcolithic times, although the typology of objects and distribution patterns are different. During EB IB the multiplicity of commodities and networks reached its peak. If it were possible to measure the degree of exchange according to Earle and Ericson's²⁴ parameters, the abundance of commodities in this period could be judged by counting artifacts from the archaeological record. Notable in this period is an increasing number of pottery types and a greater circulation of raw materials (e.g. bitumen, carnelian) and a standardized network of production and distribution of Canaanean blades and tabular scrapers indicating travel over greater distances. This is reflected in another, albeit smaller way in the archaeological record. It is interesting to note that while EB IA yielded higher frequencies of donkey remains, it was not until EB IB that the first representations of these animals in figurines appear, and then mostly in ritual contexts (see further below). This is probably the result of a guild of merchants that came into being only at the end EB I.

Noted increases in exchanged goods from EB IA to EB IB could be the result of population growth during the latter period.²⁵ However, by EB II there were a decreased number of commodities interchanged that may have also been reflected in reduced quantities of goods (e.g. pottery, metals, agricultural produce, and minerals). These changes may be the result of a reduced number of settlements in EB II that tended to have larger concentrations of population.²⁶ When interpreting this information there is a likelihood of bias because the reduced numbers of sites may be perceived as evidence of reduced exchange, although quantitatively this may not have been the case, but rather a function of an incompletely understood or preserved archaeological record. It is possible that very large population centers, not extensively excavated, would not have yielded data on this matter. Centralization in distribution of some pottery wares such as Metallic Ware surely reflects this tendency.

²³ Genz 2001; Golden 2002.

²⁴ Earle and Ericson 1977.

²⁵ Gophna and Portugali 1988: 20.

²⁶ Portugali and Gophna 1993: 169–175.

Early Bronze Age II–III

Development of exchange seems to follow the same pattern of ups and downs as urbanization during the EB Age. In Upper Galilee, the Northern Coastal Plain and the Northern Hill Country, a severe crisis occurred at the end of EB II and these regions became and remained almost deserted in EB III.²⁷ In the Huleh Valley and Lower Galilee the crisis was less severe and some centers continued to exist. In the Jezreel and Jordan Valleys and the Central and Southern Coastal Plains the number of urban settlements was more or less stable during EB II and III. The greatest stability of urban centers occurred in the Shepelah and the Southern Hill Country, with the exception of Arad in the Northern Negev, which ceased to exist by the end of EB II.

One of the changing aspects of the shift from villages to towns and cities, and the development of the exchange between these settlements, must have been the rise of “imports” into these locales. Ziadeh²⁸ has pointed out that the most changing aspects of material culture lie in the shift from a self-sufficient economy to one based on wage-labor as reflected in domestic artifacts. For instance, traditional pottery from the Palestinian village of Ti’innik (Taanakh) has been largely replaced by aluminum, glass and plastic artifacts. These objects were acquired through exterior relationships.

It is probable that during EB II and III, urban centers acquired ceramic groups such as Tel Aphek Bowls, Metallic Ware, Arkose pottery and Khirbet Kerak Ware that replaced local, coarser wares. From the beginning of EB, metal tools such as axes, adzes and chisels replaced similar flint tools. That process was not the direct result of urbanization but involved evolution of metal production during the Chalcolithic period and the development of exchange networks and a probably distinct division of labor in EB I.²⁹

On the basis of the sparse evidence it seems that during EB II and III metallurgical activities were concentrated at only a few urban sites. Genz,³⁰ however, explain this in two possible ways, suggesting that additional information from other centers is unavailable because it has either not been excavated within these sites or metallurgical activity took place in extramural locations. He further suggested the possibility that it was associated with smaller, non-urban centers of population that remain unexplored. Such

²⁷ Getzov, Paz and Gophna 2001: 41–45.

²⁸ Ziadeh 1995: 1007.

²⁹ See Rosen 1996.

³⁰ Genz 2001.

a reality as noted in the former possibilities may differ substantially from arrangements in the preceding EB I period when metallurgical activities were associated with numerous sites.

Dependent upon the alternate scenarios suggested above, methods and networks of distribution may have been quite varied. One possibility is that in EB II–III, urban centers controlled production and distribution of metals. Alternatively, they may have only had control over distribution, with indirect control of production associated with a large number of smaller producers that obtained materials from the sources.

The exchange of ceramics in EB III differs from that associated with metal. Postulated on the basis of Khirbet Kerak Ware is the existence of several centers of production during EB III.³¹ Distribution of this specialized ware suggests decentralized lines of exchange mostly centered in the north, but with some additional evidence of a more southerly distribution. Notably, this is only one ceramic group of the middle EB III period. Unfortunately, we do not have much information about the circulation of other wares in EB III, besides evidence for restricted exchange of pottery from the Dead Sea Eastern Plain, and in general, archaeological records indicating exchange are lesser.

In summary, there is a gradual tendency towards the centralization of exchange along the chronological trajectory of the EB Age. In EB I the number of commodities is greatest as are the number of exchange networks and centers from which they radiate. By EB II they are significantly reduced in number and probably more centralized. By EB III there appears to be evidence that exchange was lessened and non-centralized.

SPECIALIZED COMMODITIES

Zaccagnini,³² in his treatment of gift-giving in the Ancient Near East, has proposed that the value of a luxury item (that eventually could be a gift-item) was a combination of its exchange value in the regular way of other standard commodities plus a symbolic connotation attached to the artifact.

The three luxury or prestige items or valuables that we can point out among the commodities that circulated during EB are ivory, shells and carnelian.³³ It

³¹ Ziv-Esudri, Cohen Weinberger and Zuckermann 2007.

³² Zaccagnini 1987: 58.

³³ Other valuables such as bed models (Beck 1995), decorated bones (Zarrzecki-Peleg 1994) and alabaster objects (Amiran 1970) have not been considered in this research since there is no clear information on their proveniences they are Egyptian imports.

appears that ivory bull's heads were paraphernalia directly related to ruling classes (representing the palace or temple based institutions during EB II–III). These objects appear to fit the definition of valuables known from written sources of the Ancient Near East of the second millennium B.C. that were exchanged within the framework of elite relations between Egypt, Anatolia, Syria and Mesopotamia.³⁴ However shells and carnelian beads, presumably of lesser worth and more easily obtainable, appear to have been exchanged within the framework of village societies as early as EB I.

Donkey figurines in this study were not interpreted as a simple commodity, but rather as symbolic objects of a cult involving merchants or people linked to the use of donkeys as means of transportation and beasts of burden. In this sense they can also be called prestige artifacts. These figurines may have circulated only among these people, and were therefore not objects of exchange in regular networks.

Gifts or objects of special significance of the figurine type are, unfortunately, not sufficiently observable from available data for patterns of exchange to be ascertained with any certainty. However, some likely hints of this type of specialized exchange may be observed from the discovery of shells from the Red Sea at sites in the Mediterranean coastal plain and vice versa. In addition, some specialized pottery wares may actually have been objects within a system of gift exchanges, although no specific archaeological indicators of such a type of exchange can be discerned. Similarly, it is possible to interpret some patterns of exchange of Gray Burnished Ware during EB IA, exchange of part of the pottery southern groups in the Negev during the EB II,³⁵ and the exchanged pottery of Bab edh-Dhra and Numeira in EB III as examples of gift-giving.³⁶

MERCHANTS AND LOCAL EXCHANGE

Merchants

We cannot precisely establish the social existence of middlemen or merchants during the EB Age, though it is probable that they existed as an intermediary social caste. Such status, it appears, would sometimes be related to producers, sometimes independent of them. In all instances it is suggested they were

³⁴ Zaccagnini 1987: 60.

³⁵ Porat 1989.

³⁶ Benyon, Donahue, Schaub and Johnston 1986.

related to the social classes in power, whoever they were (elites or burgeoning rulers in EB I, rulers and their administrations in EB II–III, etc.)

If merchants were part of the communities and settlements where producers resided, they must have been dependent upon the rule of local authorities and upon the ability and willingness of producers of commodities to provision them. If, on the other hand, they resided outside settlements or centers of production (i.e. in separate locales or were itinerant) they would have been a considerably more independent class. Historical examples of such social classes operating within the parameters of the Ancient Near East appear to be found in such groups as the biblical Kenites, Rechabites and Midianites, or artisans living in the “Valley of Artificers” of the Persian period. The term “Canaanite” (meaning a stranger; Is. 23:8; Job 40:30; Prov. 31:24), possibly a synonym for trader during the Iron II, may be another example of this class of middlemen.³⁷

In instances where exchange was pursued in restricted circuits, as in the example of pottery exchange between Bab edh-Dhra and Numeira during EB III, it was probably accomplished by producers that controlled temper and clay extracted from the vicinity of some sites. Similarly, populations close to sources of raw materials (copper, flint, rocks, bitumen, etc.) or near the sea (for mollusks and fish, for instance), and those possessing a specific technology (as that of the Canaanite blades) would have been involved with specific aspects of exchange.

EB II and III urban centers with their large populations could have possessed their own group of merchants as in the case of the Ebla palatial economy of the third millennium B.C.³⁸ or that of second millennium merchants in Ugarit.³⁹ Such likely analogies suggest that the existence of a cult related to donkeys as beasts of burden was tied to the existence of a group socially differentiated from the rest of the population by its economic activities, i.e. merchants and/or donkey herders.

Cult

The existence of a cult related to donkeys, as represented by donkey figurines with containers⁴⁰ (Figure 4:2–5) may have a parallel in later periods

³⁷ And see Rainey 1996.

³⁸ Pettinato 1979.

³⁹ Rainey 1963.

⁴⁰ Amiran 1985; Ovadia 1992.

in the region of the Andean Mountains⁴¹ connected with shamanist practices. Donkey burials (sacrifices?) may have begun as early as EB I, but it seemed to have developed during the EB II and III (e.g. Lod, Tel es-Sakan)⁴²; however it is not clear if these burials (e.g. Figure 4:1) were done within sacred complexes as in Mesopotamia.

Later developments in the region contrast with the EB reality, suggesting differences, some substantive but which presage developments in trade. A change seemed to have occurred during the Middle Bronze (hereafter, MB) Age and onwards when there were a series of temples on the Coastal Plain and their internal routes, the Jordan Valley and the Aravah.⁴³ These temples produced relatively large quantities of imports. They probably served as sanctuaries related to trade and exchange, whose deities protected the merchants and their economic activities. Our research assumes that such types of temples were not present in the EB archaeological records because the inter-regional exchange was not so developed as in the MB Age.

The iconography of donkey figurines, seal impressions and bull's heads⁴⁴ during EB reflects what Panofsky⁴⁵ has called artistic motifs and subject matters representing a "conventional meaning" adapted to social, temporal, cultural and geographic backgrounds. We propose that a significant part of the "conventional meanings" of the iconography of the EB Age allegorizes social groups or social role's activities represented by animals and icons. Thus, donkeys are representative of exchange, the bull representative of governorship, while cultic scenes and buildings in seal impressions⁴⁶ are representative of governorship or priesthood. Such iconography reflects a society divided into economic, social and political groups; one in which it may be assumed that traders and/or donkey herders occupied a place in the social order.

⁴¹ Flores Ochoa 1997; Nielsen 1997–1998.

⁴² Yannai and Marder 2001; de Miroschedji *et al.* 2001.

⁴³ Kochavi 2005.

⁴⁴ Beck 1995.

⁴⁵ Panofsky 1970: 27–29.

⁴⁶ Ben-Tor's (1978) Classes I and III.

LOCAL EXCHANGE AND THE ECONOMICS OF THE EARLY BRONZE AGE

Earlier studies have focused on the effects of political and economic changes during the EB Age in the Southern Levant. They have largely drawn on developments and settlement patterns⁴⁷ and information from pottery studies.⁴⁸ For other areas of the Near East (mainly Anatolia and Mesopotamia) some interesting conclusions for the EB Age have been extracted from the archaeological record and from texts. It has been suggested that in the middle of the third millennium BC the circulation of goods of accessible materials previously produced either by households, or by independent specialists, fell under state control. However, by the end of the third millennium BC, when numerous urban centers were abandoned or considerably reduced in size and population and the number of villages increased⁴⁹ there may have been a reversion to less centralized production.

It has pointed out that during times of strong political control elites were provided with subsistence products by non-elite populations.⁵⁰ Texts from Mesopotamia, Ebla and Ugarit⁵¹ record movements of animals and agricultural products from the countryside to population centers. In the region of Lagash, archaeozoological data suggest movements of goods to regional centers during the Early Dynastic period (third millennium BC)⁵² In Iran at Malyan, during the second millennium BC, animals were probably brought to an urban center from nearby villages.⁵³

Could these examples have relevance for the Southern Levant during the EB Age? It appears that while some of the features described above are similar to the phenomena that took place in the Levant, others are very different. According to the present research, urban centers of the Southern Levant register a certain concentration of commodities; however, there were no administrative records to explain on which basis these commodities were acquired and circulated.

⁴⁷ de Miroschedji 1989; Joffe 1991; 1993; Portugali and Gophna 1993; Finkelstein 1995.

⁴⁸ Greenberg 2000.

⁴⁹ Wilkinson 1990: 102–103.

⁵⁰ Wattenmaker 1994: 197.

⁵¹ Steinkeller 1992; Pettinato 1981; Heltzer 1976; 1978.

⁵² Mudar 1982.

⁵³ Zeder 1991.

Appropriation of surpluses

It is surmised that urban or urbanized centers of sufficient population could benefit from strategic locations between different regions, as in the case of the *metateros* of Central America.⁵⁴ Arad, near the Hebron Hills in the eastern part of the northern Negev and the Arava route could reflect just such a case, while the Wadi Feinan area of copper production may be a further case. In addition its location could have allowed it to profit from exchange of tabular scrapers, if as is suspected, the Jafr Basin was indeed functioning as a producer of these tools during the EB Age, or if they were contemporaneously produced in the Har Qeren area.⁵⁵

Arad apparently controlled the exchange of southern ceramic wares in the Negev during EB II, although Jericho may have been equally influential because of its special situation.⁵⁶ It is notable that almost all of the EB commodities are found in Jericho. Authorities in these urban centers could take advantage of merchant traffic by requesting tribute for transit through an urban center of population or region under its control, or by means of an exchange of commodities (i.e. as intermediaries, perhaps at a point of re-distribution). In all these cases, ruling classes would benefit by extracting some of the value from exchange (i.e. surplus) of commodities.

A second form of appropriation of surplus through exchange occurs when authorities have control over an artisan's production as in the case of potters, knappers, smiths, and so forth. Such workshops could exist within population centers⁵⁷ or at smaller settlements. For instance, characteristic pottery wares such as Gray Burnished Ware, Metallic Ware and Khirbet Kherak Ware could have been made at workshops around population centers such as those known at Afula, Tel Dan, Hazor, Bet Yerah and Bet Shean. Flint workshops at Har Haruvim could have been controlled by Megiddo. In the case of Tel Halif it is probable that a secondary workshop could have existed within the EB III city.

A third form considers distribution of ceramic types such as Gray Burnished Ware, "Erani C" pottery,⁵⁸ Metallic Ware, and Khirbet Kerak Ware in which two or more networks are involved. Similar distribution

⁵⁴ Rathje 1972.

⁵⁵ Rosen 1997: 71–75, 105–106; Quintero, Wilkie and Rollefson 2002.

⁵⁶ Anati 1962, Dorell 1978.

⁵⁷ Cf. Ilan 2001.

⁵⁸ Yekutieli 2002.

networks are notable for carnelian objects as well as exotic imports, including Nilotic mollusca and fish remains, and Egyptian and Egyptianized products.⁵⁹ Carnelian was concentrated in two or three zones,⁶⁰ while *Chambardia* was distributed throughout the Southern Levant.⁶¹

Although valuables or prestige objects were dispersed in quite different patterns from those observed for utilitarian commodities, nevertheless, their circulation networks may well have been identical. The weight and bulk of prestige items allowed them to be exchanged more easily and over great distances. It is surmised that this was accomplished with extant networks of exchange of utilitarian commodities such as pottery vessels.

Tabular scraper exchange seems to have been a continuation of the Chalcolithic period into the EB Age, while Canaanean blades were distributed through a different system throughout the EB. At the same time, pottery groups developed and changed in almost each sub-period of the EB Age, with different regional centers of production and different distribution networks coming to the fore.

Domestication of the donkey seems to be a factor that not only helped with the procurement of raw materials and the exchange of commodities between distant regions, it must have also lowered the costs of commodities relative to the Chalcolithic period, prior to the domestication of this beast of burden. Accordingly, if herding and ownership of donkeys were the realm of a restricted group of communities or populations in the EB Age, this factor must have benefited the owners of donkeys or given rise to them.

Rulers of the EB communities, whether they represented a village, a town or an urban center, derived economic advantages in the form of the administration of exchanges. It can be suggested that an urban center and its relative wealth was based on profits deriving from the exchange of commodities of other communities passing through its territory. A surplus could only be realized when an “inequality” occurred in the exchange of commodities as a result of differences in the division of labor between one community or region with another; i.e. as a result of the differences in the costs of production and transportation of the commodities between different sites or regions.

⁵⁹ Egyptian and Egyptianized pottery is primarily found in the Southern Coastal Plain and the Shephelah. It is rare in the north, although exceptions may be found at Megiddo (Ilan and Goren 2003).

⁶⁰ The main carnelian bead bearing sites are Jericho (Kenyon 1960: Figs. 28, 55, 65), Arad (Amiran *et al.* 1978: Pls. 68, 69, 118) and Bab edh-Dhra (Wilkinson 1989a,b).

⁶¹ Bar-Yosef Mayer 2002.

Archaeological remains from settlements dating to the very end of EB I through III seem to confirm part of this phenomenon through the existence of public buildings, some of them characterized as palaces, temples or granaries, and fortification systems, e.g. at Tel Dan, Hazor, Khirbet ez-Zeraqon, Megiddo, Bet Yerah, 'Ai, Jericho, Tel Yarmut, and Arad.⁶²

It appears as if two main types of urban centers existed during the EB II–III *vis-à-vis* exchange systems:

- (1) Those that took advantage of the sources in their region and had some kind of monopoly on a given production branch (pottery, flint, raw materials, etc).
- (2) Those that took advantage of their location near trade routes or passes, acting as intermediary agents between diverse regions.

Low Level Economy

This work suggests that a lack of written documents indicates the degree of exchange remained at a relatively low level. This may have been due to a lack of integration of networks that did not favor exchange in the EB Age of the Southern Levant, nor allowed them to coalesce into a major system as it did in other, more populous regions of the Ancient Near East. Accordingly, unification of medium exchanges was not necessary and the transactions were not recorded.

This situation is reflected in a lack of evidence for the existence of weight-standards, and consequently a local system of weights, while metrology seems to have existed as a system of linear measures.⁶³ Crucial for understanding any exchange system is an ability to determine concrete values or information concerning its standard system of weights. Such systems are identifiable in objects and in the literature of the Ancient Near East. Legal documents of the Old Babylonian period and the El Amarna Letters offer, amongst other information, testimony to fraud and contamination of precious metals in commercial transactions,⁶⁴ emphasizing the importance of such standards.⁶⁵

⁶² Joffe 1993: 82–83; Herzog 1997: 42–97.

⁶³ de Miroschedji 2001.

⁶⁴ Zaccagnini 1976: 560.

⁶⁵ The *topos* of the merchant that complicates himself with weights in order to cheat appears not only in the Mesopotamian literature (Lambert 1960: 132–133; Finet 1973: 70, § P) but also in the Biblical sources (Lv. 19:35; Dt. 25:13–16; Am. 8:5).

In Mesopotamia, numerical records existed in the form of tokens prior to the advent of cuneiform records,⁶⁶ but these kinds of artifacts have not been found in the Southern Levant. By the Uruk period (fourth millennium BC) clay tablets found at Habuba Kabira contained numerical symbols revealing that some aspects of a bureaucratic administration in the Upper Euphrates existed.⁶⁷

Of course it can be suggested that a system of accountability existed based on organic (non-surviving) materials, such as the system of *quipus* in the Inca empire⁶⁸ and that writing was not necessary since its invention need not necessarily relate to economic activities.⁶⁹ However, as Egyptian and Mesopotamian sources reveal, numerical and administrative registration forms existed from the fourth millennium BC onward, and there is no reason that Southern Levantine populations in contact with neighboring cultures did not take advantage of such practices as the need arose. It is difficult to understand why, given the knowledge of how to utilize clay for fashioning figurines and pottery, Southern Levantines did not use it for record keeping as did their neighbors.

The economic life of the EB Age of the Southern Levant was probably at a level of exchange called “barter”, or “the first exchange stage” in Ebla.⁷⁰ Urban centers like those of Mesopotamia and Syria exchanged commodities and also utilized weight-measure systems based on metal values. The sole suggestions of administrative local apparatus in the Southern Levant are seals and sealing impressions.⁷¹

There is no proof for the existence of exchange media such as metals or specific artifacts in the archaeological record of the EB Age of the Southern Levant. Furthermore there is no evidence to support the existence of copper ingots as units of measure as they appear in the later Intermediate Bronze Age. Had they existed, one would expect to have found some evidence for them. Metal hoards are known and appear to be examples of a primitive form

⁶⁶ Schmandt-Besserat 1992.

⁶⁷ Akkermans and Schwartz 2003: 194, Fig.6.9.

⁶⁸ Quilter and Urton 2002.

⁶⁹ Postgate, Wang and Wilkinson 1995.

⁷⁰ Pettinato 1979.

⁷¹ Beck 1995.

of accumulation of values. Flint caches are additional forms, while metals seem to have a more universal character in the production systems.⁷²

More important is that there is no indication that land was considered a commodity, i.e. that an exchange of lands existed during the EB Age in the Southern Levant as with the sale of land and houses documented in Mesopotamia during the fourth millennium BC.⁷³ It has been suggested that land was the main means of production for an economy based on agriculture, and that the historic development of land-property went from tribal to royal and sanctuary properties, until private estates. Heltzer⁷⁴ has pointed out that the relation between exchange-values of the land and basic commodities indicate the level of economic development of a country. However, there are other factors that could be involved in the exchange-value as the quantity of population in relation to the cultivated lands: the type of crops cultivated in a given terrain, the geographic characteristics of the country, or the existence of other natural resources. All these factors determine the relative social costs invested in the cultivation of the lands in relation to other activities.

Interestingly, it has been suggested that trade as a broad regional phenomenon in the EB Age Mediterranean world was directed towards the accumulation of wealth.⁷⁵ In contrast to previous periods, exchange in the EB Age was characterized by an increase in scale and in kind, especially by the addition of copper and copper objects as another commodity. The addition of this commodity is a qualitative phenomenon and not an addendum of a simple further commodity, since metals were a medium of exchange and accumulation. Some accumulation of wealth seems to have occurred as reflected in public (monumental?) buildings from the end of EB I, EB II and EB III; but the conversion of metals into actual exchange media did not come about until after the end of the EB Age.

It is paradoxical that in the ruralized society of the Intermediate Bronze Age (EB IV), when the EB urban centers collapsed, copper ingots appear in a standardized mode,⁷⁶ causing one to consider them as a first means of payment.⁷⁷

⁷² And see Rowlands 1971; Philip 1988.

⁷³ Gelb 1979: 68–73.

⁷⁴ Heltzer 1978: 115.

⁷⁵ Runnels 1988.

⁷⁶ Dever and Tadmor 1976; Cohen 1999: 260–265.

⁷⁷ Meshorer 1976.

In summary, the EB Age economy in the Southern Levant seems to have been a loosely organized system of exchange networks with little sense of overall control. A preliminary schematic synthesis of our research on these networks is suggested in Figure 5. Different commodities were exchanged as needs arose and there does not appear to have been any visible equilibrium between different branches of the economic life (pottery production, metal production, flint tool production) of even the most sophisticated societies of the era. These aspects appear to have operated as more or less independent networks in which each commodity may be characterized by its own level of development and sophistication, dependent upon region and chronological niche.⁷⁸ This low level of integration is a hallmark of the EB Age economy. Accordingly, there was no need for a single medium of exchange and it was apparently not developed until the MB Age or later. As economic integration did not exist during EB, political unification did not come about until later periods, after such developments in neighboring areas.

It is hoped that a more theoretical work, combined with the use of analogies derived from ethnoarchaeology, will be applied to study of the EB Age in general, and in particular to its economic aspects that are so tied to networks of exchange. It behooves field archaeologists to further develop field strategies that will allow for the broad collection of data that can also be utilized by other social scientists for studies augmenting more traditional archaeological approaches. From such a work it would be possible to derive insights that could be applied to the study of additional periods and regions.

ACKNOWLEDGEMENTS

This article was presented as a paper in the workshop “Bronze Age Trade in the Eastern Mediterranean and the Near East” held at the 5th International Congress on the Archaeology of the Ancient Near East, April 6th, 2006, Universidad Autónoma de Madrid, Madrid, coordinated by Peter M. Fischer and the author of this article. It represents a synthesis of the research presented in the PhD of the author.⁷⁹ This research benefited from collaboration with a number of colleagues who shared information on unpublished material from their excavations or researches. They are: Yael Abadi, Uzi Ad, the late David Alon, Rina Bankirer, Yaakov Baumgarten, Baruch Brandl, Eliot Braun, Edwin van den Brink, Emmanuel Eisenberg, Yuval Goren, the late Ornit

⁷⁸ For a so-called law of uneven and combined development in history see Novack 1974.

⁷⁹ Milevski 2005.

Ilan, Alex Joffe, Ori Fragman-Sapir, Hermann Genz, Amir Golani, Ram Gophna, Nigel Goring-Morris, Raphael Greenberg, Hamoudi Khalaily, Nili Liphshitz, Amihai Mazar, Ofer Marder, Yonatan Nadelman, Graham Philip, Stephen Pfann, Naomi Porat, Rivka Rabinovich, Steve Rosen, Yorke Rowan, Sariel Shalev, Sam Wolff, Eli Yannai, Vladimir Zbenovich, and Adi Ziv-Esudri. I would like to thank an anonymous reader for his critical and helpful comments; of course, the responsibility on this paper remains solely mine.

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Regions

- HV: Huleh Valley
- UG: Upper Galilee
- WG: Western Galilee
- LG: Lower Galilee
- CCP: Central Coastal Plain
- JV: Jordan Valley
- GO: Golan
- CHC: Central Hill Country
- SCP: Coastal Plain
- SH: Shephelah
- NN: Northern Negev
- JD: Judean Desert
- DSEP: Dead Sea Eastern Plain
- AR: Aravah
- CN: Central Negev
- SN: Southern Negev

Sites

- 1. B. Haemcq.
- 2. Meona
- 3. Gamla
- 4. T. Teo
- 5. Hazor
- 6. B. Yerah
- 7. Q. Ata
- 8. T. Qashish
- 9. Yiftahel
- 10. E. Shadud
- 11. Affula
- 12. H. Haruvim
- 13. Megiddo
- 14. B. Shean
- 15. T. Shalem
- 16. T. U. Hammat
- 17. T. Megadim
- 18. E. Assavir
- 19. T. Aphek
- 20. T. Dalit
- 21. 'Ai
- 22. Jerusalem
- 23. Lod
- 24. Azor
- 25. Gezer
- 26. Hartuv
- 27. B. Shemesh
- 28. T. Yarmuth
- 29. Fatzael
- 30. Palmahim
- 31. Gat-Guvrin
- 32. Lachish
- 33. T. el-Hesi
- 34. Nizzanim
- 35. Afridar
- 36. T. Erani
- 37. Site H
- 38. E. Besor
- 39. Gat Guvrin
- 40. T. Sera
- 41. T. Hebron
- 42. Arad
- 43. T. Halif
- 44. Har Qeren
- 45. T. Ikbene
- 46. H. Avnon
- 47. T. es-Sakan
- 48. B. Uvda
- 49. B. Edh-Dhra
- 50. Numeira
- 51. W. Feiman
- 52. M. Shalem
- 53. Jericho
- 54. T. Abu Haraz
- 55. T. Es-Saydah
- 56. Pella

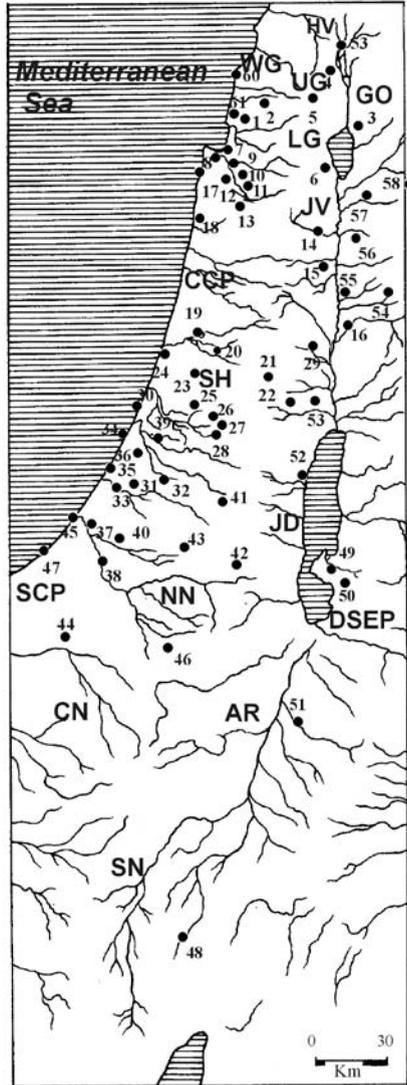


Figure 1.

Regions and sites of the Early Bronze in the southern Levant.

Key of Networks

1. Pottery: Gray Brunished Ware
2. Pottery: Wares from the Centre and the Jordan Valley
3. Pottery: Metallic Ware
4. Pottery: Southern Wares
5. Pottery: Khirbet Kerak Ware
6. Flint: Canaanian Blades
7. Flint: Tabular Scrapers
8. Basalt
9. Metallurgy
10. Asphalt
11. Red Sea Shells
12. Mediterranean Shells

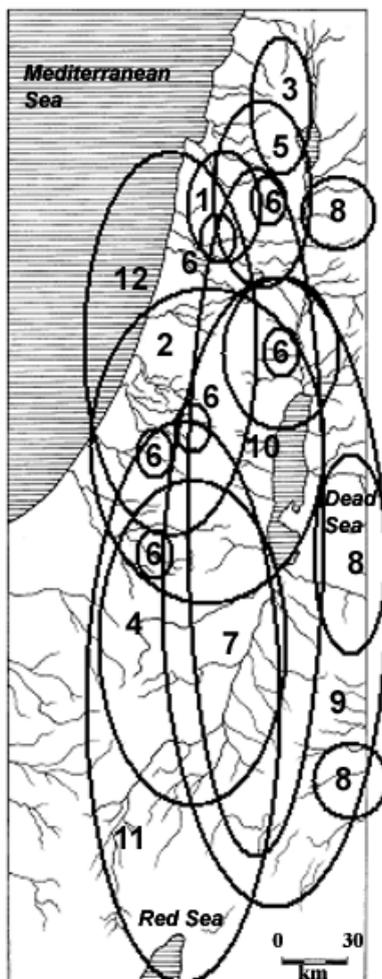


Figure 2.

Commodities exchange networks of the Early Bronze Age in the southern Levant.

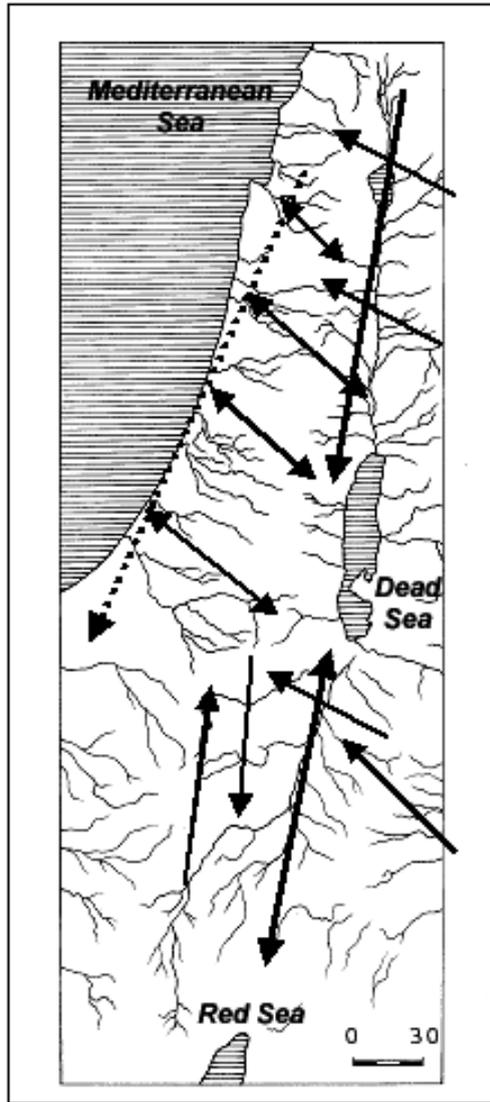


Figure 3.

Directionality of exchange in the Early Bronze Age of the southern Levant.

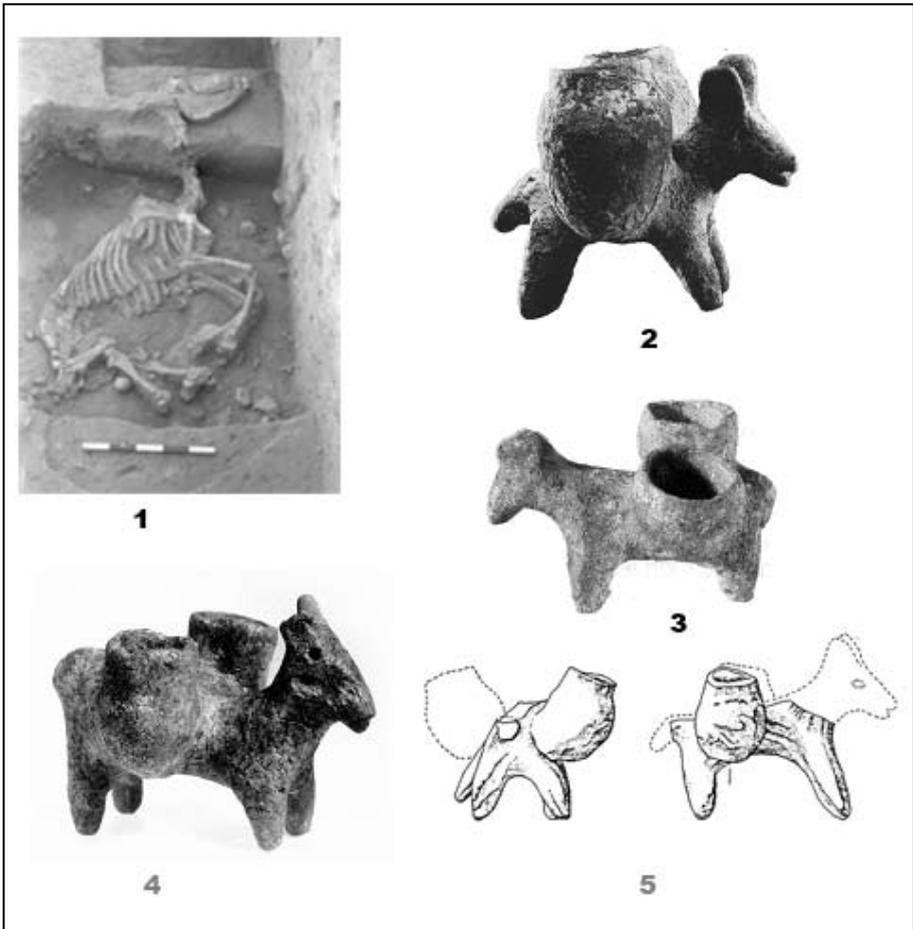


Figure 4.

Donkey remains and donkey figurines of the Early Bronze Age in the southern Levant (Courtesy of the Israel Antiquities Authority). 1. Donkey remains from Lod. 2. Figurine from Azor. 3. Figurine from Barkai junction. 4. Figurine from Bat-Yam. 5. Figurine from Tel Dan (adapted from Greenberg and Porat 1996).

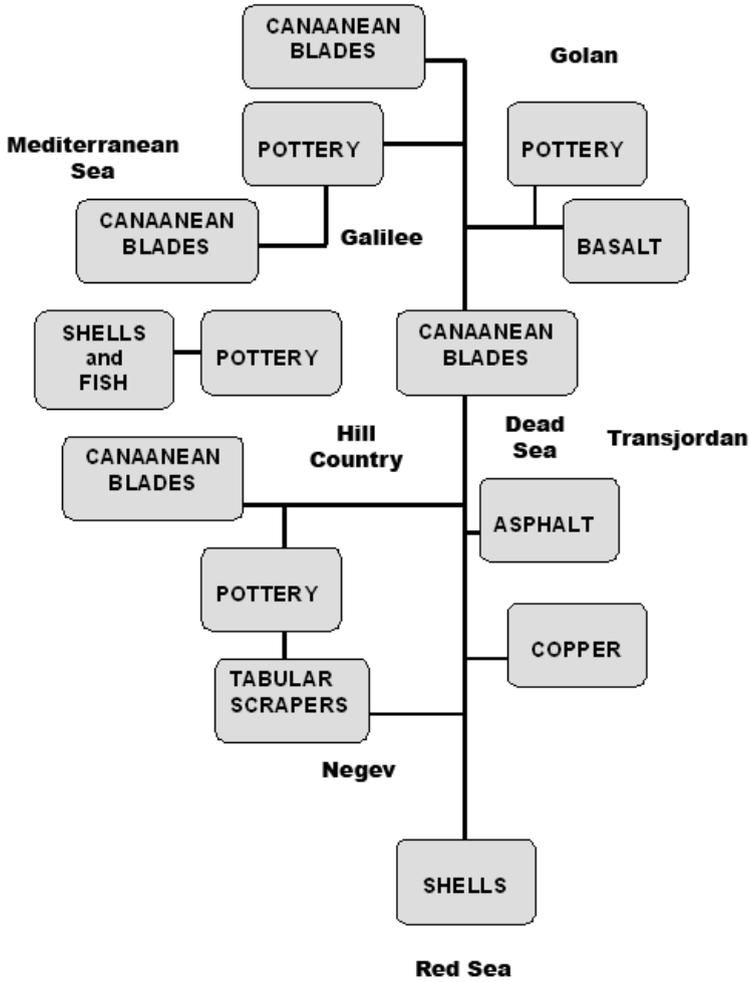


Figure 5.
Schema of the exchange networks in the Early Bronze Age
of the southern Levant.