

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/240313295>

The growth of the Mediterranean economy in the early first Millenium BC

Article in *World Archaeology* · February 1993

DOI: 10.1080/00438243.1993.9980214

CITATIONS

143

READS

1,026

2 authors, including:



[Susan Sherratt](#)

The University of Sheffield

33 PUBLICATIONS 820 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



Excavations and publications of Lefkandi-Xeropolis, Euboea [View project](#)

The Growth of the Mediterranean Economy in the Early First Millennium BC

Author(s): Susan and Andrew Sherratt

Reviewed work(s):

Source: *World Archaeology*, Vol. 24, No. 3, Ancient Trade: New Perspectives (Feb., 1993), pp. 361-378

Published by: [Taylor & Francis, Ltd.](#)

Stable URL: <http://www.jstor.org/stable/124714>

Accessed: 11/01/2012 09:19

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at
<http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



Taylor & Francis, Ltd. is collaborating with JSTOR to digitize, preserve and extend access to *World Archaeology*.

The growth of the Mediterranean economy in the early first millennium BC

Susan and Andrew Sherratt

One of the most crucial but poorly understood phases in the development of the Mediterranean economy is the transition from the Bronze Age to the Iron Age. During this period of fundamental social transformation, the command economies of the second millennium gave way to less centralized forms of economic organization which were to characterize a new period of accelerating growth that lasted for the whole of the first millennium BC (Hicks 1969: chs 2–4). The development of early Iron Age trading systems is vital to an understanding of the nature of the Ancient Economy, with its attendant controversies (Finley 1985; Lombard 1971).

The new pattern had already begun to take shape in the centuries before 1000 BC, in the processes which underlay the disappearance of the Bronze Age palace centres and the new social forces which were released by their dissolution (Sherratt and Sherratt 1991). Fundamental to this new pattern was the dissociation of trading activity in high value materials from the control of the state. While the Bronze Age coastal cities of Cyprus and the Levant had achieved a considerable degree of commercial autonomy within contemporary political power blocs, the continuing differentiation of commercial and political structures now came to characterize the internal organization of individual states themselves. This had important consequences for the nature of the documentary record, since trading activity was no longer reflected in state records and the literature of the ruling class, so that the economic history of the first millennium has been systematically distorted both by the nature of the evidence and the theories which have grown up to rationalize it (cf. Rowlands 1984). It is here that the evidence of archaeology can offer an important contribution to understanding the processes leading to the civilizations which European scholarship has canonized as 'classical' but which must themselves be situated in a wider matrix of contemporary economic and political activity.

The developments which differentiate the first millennium from that which preceded it were social, political and technological; yet these elements must not be seen as coincidental features with separate origins, but rather as complementary aspects of an unfolding pattern with its own internal logic. Before considering the chronological sequence of their appearance, it is worth noting the basic elements of the new pattern. In abstract form, these can be summarized as follows:

- (1) In place of the bureaucratic and palace-centred diplomatic and trading networks of

Bronze Age internationalism, mercantile city-states became the building blocks in a new economic framework. Temples, rather than palaces, became the symbols of communal consciousness and economic success; merchant enterprise, rather than state-controlled exchange, became the dominant mode of trading activity.

(2) The production of iron as a useful metal – first of all in Cyprus as early as the twelfth century BC – appears to have been part of the process of progressive commercialization in the east Mediterranean, and developed (like glass) in the competitive search for new added-value products in the later second millennium; but its effects on the nature of trade were to be far-reaching. The spread of iron-working inevitably subverted systems based on the acquisition and circulation of bronze; and since control of this system was fundamental to the character of Bronze Age polities, this alteration was an irrevocable step in preventing the re-emergence of these kinds of centralized economies. It also made control of precious metals even more important. This social aspect of iron-using was at least as important as its growing technological significance.

(3) New forms of political power gradually emerged in response to the erosion of direct control of economic activity. Territorial definition became important both at the level of the boundaries of city states and of larger entities, giving rise to new forms of empires based on direct politico-military control and involving new forms of regional surplus extraction and tribute.

(4) Tensions between land-rooted and commercial interests became more explicit. On a larger scale, this might be manifested in a complementary relationship between territorial empires and mercantile city states on their boundaries – and especially on coasts – through which foreign trade was channelled. This differentiation also occurred, however, within independent states and individual cities, where mercantile activity was often confined or separated from the main arenas of political power.

(5) As in the Bronze Age, overseas trading stations concerned with the acquisition of raw materials were established in less developed areas on the periphery of the urban world and now along the whole length of the Mediterranean, but even here initially independent trading posts ('pre-colonial movements') were often converted into formal colonies by the mother-cities which attempted to introduce elements of overt political presence. Their formal territorial definition allowed some of these colonies to evolve into autonomous polities.

(6) The general concern for political control within well-defined territorial boundaries affected the nature of warfare, both on land and sea. The defence of frontiers required new forms of military organization and technology, whether in the drilled citizen armies of small states or the large standing armies of empires. It was reflected in the increasing differentiation of warships from merchantmen, use of cavalry rather than chariots, and synchronized mass-infantry tactics. These required a growing volume of *matériel*. At sea, the need to counteract pirates preying on a growing volume of maritime traffic was a further incentive to maintain naval power.

(7) The more explicit definition of territorial polities created a new consciousness of ethnic differences, which was sharpened both by the increasing scale of commercial competition and by rival movements of colonization or imperial expansion – in some cases involving the forced movement or exile of populations. The spread of literacy (both within and between societies) helped to define and harden linguistic units and contributed to a self-conscious identification of ethnicity with language.

(8) These developments altered the nature of slavery, which increasingly took the form of chattel slavery alongside the forms of household ('patriarchal') slavery practised earlier. Slaves became a commodity traded in large numbers and were applied to large-scale construction and industrial works, including agricultural work and mining. Slave populations might now be ethnically distinctive, often brought from considerable distances.

(9) The requirements of tribute, commerce and military expenditure (e.g. mercenaries) increased the need for stocks of bullion, which were acquired both by overseas exploration and the intensification of mining enterprises. The economic and strategic importance of supplies of precious metals led to intervention by the state and attempts to authenticate, regulate and control them through the formalization of coinages – standardized, guaranteed units of composition and weight, with the identifiable stamp of the state (cf. Hart 1986). This practice began in areas where silver production took place within the territory of the state (like Lydia and Greece), rather than in areas (like the commercially more advanced Phoenicia) where silver had to be imported. The importance of coins as opposed to the use of precious metal in conventional units of weight probably has as much to do with this latter aspect as with the needs of commerce, and too sharp a line cannot be drawn between 'monetary' and 'pre-monetary' usages.

(10) Although these features appeared only gradually during the early first millennium, and took different forms in different sections of the Mediterranean (though generally earlier in the east), they formed part of a progressive increase in scale which surpassed anything achieved in the Bronze Age. This can be seen not only from the speed of first millennium developments, the size of the units involved, and the appearance of capital cities (with populations in the range 30–100,000). These imply the movement of hitherto unparalleled volumes of material. In geographic terms, the expansion of activity throughout the Mediterranean opened up a new hinterland, especially in southern temperate Europe, which now began to take on the functions of a periphery. This enhanced the importance of Italy as a junction between Mediterranean maritime routes and land routes into Europe, leading ultimately to the emergence of Rome.

As in the second millennium, the process of expansion was by no means the simple progressive extension of a 'developed' economy; rather it had the character of a long-distance intervention, linking existing cycles of exchange along the length of the Mediterranean and initially concerned with a few, high-value products. As each area responded to the opportunities presented to it, however, the local differentiation of economic activity created complementary zones of different types of production to a much greater extent than in earlier times, with the emergence of new centres and supply chains. A complex series of competitive manoeuvres, involving bypass routes and shifting political alliances or imperial conquests, kept the pattern constantly fluid and mobile.

The following sections attempt to summarize the complexities of this process in the first half of the millennium, divided somewhat crudely into centuries, primarily in terms of its economic logic. This description is not intended to exclude other aspects of the process, such as religious and ideological ones, which relate to the wider problem of the contact of cultures. The fact that it is necessary to describe it in this way at all, however, is a result of the compartmentalization of scholarship which has often treated individual parts of the Mediterranean region as if they had developed in isolation (Wolf 1982: 3–19). This account is intended to redress the balance.

The Levantine initiative: tenth and ninth centuries (Fig. 1a)

Although several of the features which were to be characteristic of the first millennium had emerged in the brief period of post-palatial trading activity centred on Cyprus in the twelfth century BC (Sherratt and Sherratt 1991: 373–5), the effective (though not total) collapse of inter-regional trade for part of the eleventh century marks the subsequent revival as a new phase. The speed with which this revival took place, however, indicates its dependence on what had gone before, and especially in the areas associated with maritime trade. Both Egypt and Assyria, while benefitting from the elimination of rivals, were hard hit by the collapse of centralized power, which brief military revivals did not reverse. The area which recovered most rapidly was the southern Levant (Philistia and Phoenicia), linked both to Cyprus and now also to the incense-producing areas of southern Arabia, via the west Arabian coast route. This southern Levantine focus was the core region of expansion at the start of the first millennium.

Its success lay in the combination of external connections with its own agricultural and manufacturing resources. Its manufacturing capacity (apparent already in the twelfth century, when it was closely connected with Cyprus) is evident in Philistia in the industrial production of textiles and olive oil at large installations such as those at Tell Mique; their products included fine dyed cloth (Tyrian purple and royal blue) and the perfumed oil represented by small pottery and faience flasks. Transport amphorae reappeared at southern towns like Ashkelon and Lachish in the tenth century (Zemer 1977). Inland, the growth of the Kingdom of Israel was closely connected with overland trade on the north–south caravan routes to Arabia, whose importance is indicated in the Biblical account of the visit of the Queen of Sheba (Saba'). The linkage of inland and coastal resources (between Israel and Phoenicia) is indicated by the agreement between Solomon and Hiram King of Tyre (I Kings 6) for cedar-wood to build the temple in exchange for annual supplies of wheat and oil, and Phoenician ports gave access to Mediterranean sources of precious metals for which Solomon and Hiram maintained a joint fleet. Southwards sea traffic in the Red Sea was also potentially important, and an attempt to bypass the west Arabian land route is recorded in the account of the joint maritime expedition which Solomon and Hiram undertook down the Red Sea for the gold of Ophir (I Kings 9; Chronicles 8; Liverani 1987: 72–3).

The principal focus of Tyrian and other Phoenician traders, however, was the Mediterranean, and especially the main highway of east–west maritime traffic from Cyprus along the south Anatolian coast to the Aegean, and to Crete and the central Mediterranean – the artery of trade from the Bronze Age to the Medieval period (cf. Pryor 1988: figs 2 and 27). Cyprus was a key staging point in the westward contacts which it had pioneered in the closing centuries of the Late Bronze Age, and may again in the tenth century have added its own products in characteristic lentoid flasks. From here the links led to Crete, which was a stepping-stone to the west Mediterranean at least as far as Sardinia, where a ninth-century Phoenician inscription includes the word *tarshish*, refinery. The interest in the high value metals of this area (silver, and perhaps tin) represent a revival – or even a continuation – of the long-distance routes of the late second millennium pioneered by Cypriots. Cypro-Phoenician fine bronzework in both Crete and Sardinia demonstrates the sophistication of the exports now reintroduced to these areas.

Trading stations in Sardinia gave access to the indigenous exchange cycles of the coastal west Mediterranean, linking peninsular Italy, north-west Africa, southern Iberia (and thus the tin of the Atlantic route), which could provide a variety of raw materials; activity of this kind could lie behind the high traditional dates for the 'founding' of Cadiz and Utica. Contacts with the proto-urban communities of Villanovan Italy, with their strong central European links, seem mostly to have been indirect and mediated through Sardinia.

Another route led by Rhodes to the Aegean, with a nodal point in the sheltered Straits of Euripos, between Euboea and mainland Greece. Here, below the tidal race of Chalkis, was a natural stopping-point for ships waiting to travel further up the east coast of Greece into the north Aegean, or to make contact with existing networks of exchange; its importance is indicated by the rich tombs at Lefkandi with their gold jewellery, fine cloth, Cypro-Levantine figured bronzework and perfume flasks and Egyptianizing faience trinkets. This community was apparently growing rich on passing traffic in search of high value materials like the silver of nearby Lavrion, acquiring foreign goods and metalworking techniques; and, as in the west Mediterranean, later traditional histories refer to Phoenician activity on Aegean islands such as gold-bearing Thasos.

The ninth century saw an intensification of this pattern, with the construction of artificial harbours at towns on the Levantine littoral like Tabat-el Hamman – a sign that larger cargo ships were once again coming into use. The northern Levant now became more important, as the revival of Assyria revitalized the coastal towns supplying goods from Phoenicia over the Syrian saddle and perhaps attracted Phoenician commercial settlement (Kestemont 1985); this area, too, joined the westwards seaborne trading ventures. Typically north Syrian metalwork appears at Lefkandi, while Euboean pottery cups and Attic kraters found in Cyprus indicate that some manufactured goods were now being brought back in return, in addition to valuable materials from the wider hinterland. By the end of the century Euboean cups could be found along with Cypriot wares in port towns in Cilicia and the Gulf of Iskenderun such as Al Mina. The Aegean may now have supplied other materials as well, such as iron which could have been produced in Euboea in exportable quantities (Bakhuizen 1976), and although direct evidence is lacking it is not improbable that its early production was concentrated in such centres of technical expertise. Greek textiles, too, are hinted at by geometric patterns in the pottery (Barber 1991).

The increasing volume of traffic on the east/west Mediterranean axis led to the growth of strategic points along the route. In Cyprus this intensification is manifested in the politicization of Phoenician links, through the foundation of a formal colony at the port-town of Kition, marked by impressive temples and perhaps associated with the exploitation of the copper mines at Tamassos. Other coastal towns like Amathus also prospered. Cypro-Phoenician flasks appeared in some numbers on Rhodes and Kos and also in Crete, and were soon followed by local versions (for rebottling unguents imported in bulk?), while the Phoenician inscribed bowl and gold jewellery from graves in the Tekke cemetery near Knossos have been held to demonstrate the presence there of eastern specialist craftsmen (Coldstream 1982). By the end of the century the port town of Kommos in southern Crete, with its finds of Levantine bulk-transport amphorae, had acquired a Phoenician shrine (Shaw 1989).

This stage of tenth- and ninth-century contacts – Niemeyer's (1984; Gehrig and Niemeyer 1990) '1. historische Stratum' – was characterized by a marked disparity

between the nascent city-states of the east Mediterranean littoral and their maritime contact zone, even though growing local centres (like those at Lefkandi and Athens) seem to have been stimulated by the long-distance contacts of Levantine traders. Such contact points were typically established on islands, perhaps themselves on the edges of indigenous exchange systems. These mercantile movements belong to a pre-colonial phase of activity, which seems to have been a relatively fluid search for high-value materials with only the beginnings of a more formalized pattern. Piracy and the adventitious capture of cargoes and slaves is likely to have been part of the picture in the early days, as revealed in Homer's portrayal of the Phoenicians encountered by Odysseus. Nevertheless in the eastern half of the Mediterranean this was gradually beginning to give way to some renewed absorption of Near Eastern religious and cultural values, expressed in shrines and temples, the use of unguents in purification rituals and the syncretizing nature of Levantine artistic motifs (Rowlands n.p.): and perhaps also to some regional specialization in production – for instance in iron and copper – which was to be a characteristic of the following phase. However, the formalization of trading contacts through colonies and the growth of larger political units, and the consequent definition of ethnic labels, was largely a feature of the succeeding centuries.

The joint venture: the eighth century (Fig. 1b)

The maritime network established in the first two centuries of the first millennium now grew in importance as the surrounding land areas were increasingly drawn into it: the continuing growth of Assyria drew trade and tribute from the Levantine cities, intensifying their quest for high-value materials further west; the emergence of city-states in the Aegean added new centres of production and demand for raw materials; indigenous foci in Villanovan Italy and southern Spain developed under strong external contacts (Frankenstein 1979). Long-distance traders now began to penetrate closer to the sources of their supplies, rather than simply contacting the edges of indigenous exchange cycles. The 'developed' area within which advanced manufacturing activities (textiles, perfumes) took place now extended as far as the Aegean, which could export its own manufactured products westwards; and both Aegeans and Levantines participated in trading missions and colonial foundations in the central Mediterranean, with Phoenicians leading the way further west. The complexity of the pattern increased as new players joined the game.

The growing importance of the Assyrian Empire led to the formation of secondary states on its immediate periphery: as well as the older competitor of Urartu and the Aramaean kingdoms of north Syria, the appearance of spectacular 'royal' burials at Gordion in Phrygia and Salamis in Cyprus (Rupp 1987) indicate the emergence of new polities whose dynastic rulers asserted their political presence with ostentatious items of Assyrian and Levantine elite culture: chariots, bronze and ivory thrones, and Urartian or north Syrian metal drinking equipment. From the later part of the century onwards, individual items from as far afield as the Caucasus, west Persia ('Luristan') and Babylon might now be found in the tombs and sanctuaries of the eastern Mediterranean.

This infilling of the political map of the east Mediterranean is symptomatic of the increasing density of east/west trade, which it must be emphasized was a *north*

Mediterranean phenomenon: the north African coastal route westward from Egypt to Tunisia, sometimes attributed to the Phoenicians (e.g. Schauer 1983: Abb. 2), is anachronistic for this period and was not regularly used before the later seventh century. Westward maritime traffic followed the south Anatolian coast from Cyprus to Rhodes, and then could either cycle anti-clockwise around the Aegean or continue westwards in two streams: either along the southern margin, through Crete and up the west coast of Greece to cross to southern Italy and Sicily, or through the Cyclades to Euboea and Attica. Here an alternative westward route was possible for small ships using the isthmus of Corinth to avoid the dangerous circuit of Cape Malea in the southern Peloponnese. The Cretan route was supplied by Phoenician installations such as Kommos; the latter route depended on a measure of co-operation with the native Greek communities. It may be that these routes were operated by merchants from different Levantine cities: the links between Euboea and northern Syria suggest the possibility that a chain of trading-partnerships had already been established, perhaps paralleled by a more metropolitan Phoenician involvement (via Kition, amongst others) on the south Aegean route (Winter 1979; cf. Boardman 1990: fig. 2). These complementary (though necessarily overlapping) spheres of activity were equally significant further west.

The Aegean must have seen a considerable density of traffic, in which both indigenous and eastern seamen participated without apparent rivalry. Indeed it is precisely in these circumstances that the transmission of aspects of oriental culture (ideas of ritual purification, mythology and its accompanying iconography, the use of alphabetic writing: Sourvinou-Inwood 1981; Morris 1992) took place, and were adapted to the needs of emerging political ideologies. The core area of Greek territorial state formation was the eastward-looking region of Euboea and the Saronic Gulf with its important trans-isthmian link (Chalcis, Eretria, Athens, Corinth, Argos); but equally striking are the 'international' sanctuaries at nodal points on the maritime routes (Lindos, Samos, Delos, Delphi, Pherai, Perachora, Olympia, amongst others: Kilian-Dirlmeier 1985). These combined the functions of establishments for the needs of sailors and travellers (some even including temple prostitutes) with foci of regional and supra-regional identity. The intimate relationship between religion and trade, noted already in connection with purely Phoenician installations like Kition and Kommos, here takes on a new dimension as part of a process of acculturation, by which Greeks first absorbed and then transformed these oriental elements into part of a growing pan-Hellenic consciousness – in which the religious centres of Delos, Delphi and Olympia played an especially important part.

The westward routes converged along the west coast of Greece to skirt the Ionian sea and avoid the long crossing to Italy; if Phoenician boats were larger, as seems probable, they may have been able to strike a more direct route towards Sicily than smaller craft suitable for hauling across the Corinthian isthmus – a practice well known in the history of long-distance trade (and used by the Varangian Vikings to move between Russian rivers on the route to the Black Sea). The Phoenician centres in the west Mediterranean clustered in the triangle formed by western Sicily, southern Sardinia and the Gulf of Tunis, their node at Utica/Carthage. Some of these had now acquired the status of formal colonies, but their interest was in trade rather than in the acquisition of territory. They provided access to the growing indigenous trading network – itself stimulated by earlier Phoenician intervention – which joined the Atlantic Late Bronze Age contacts through

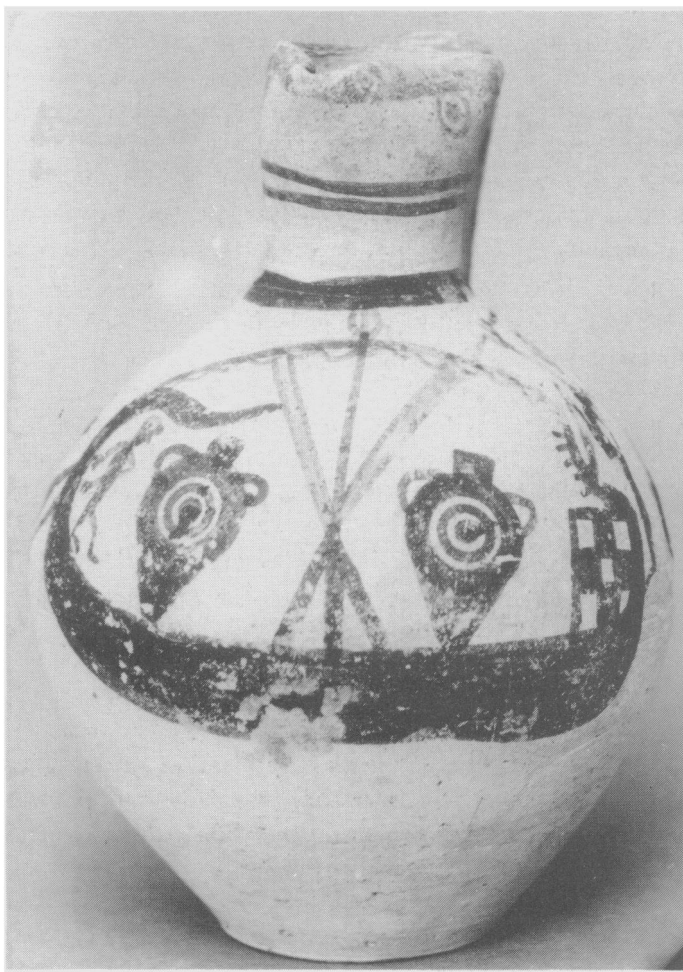


Plate 1 Schematic representation of a merchant ship loaded with transport-amphorae, on a late eighth-century Cypriot jug: British Museum photograph.

southern Spain and the Balearics to northern Sardinia and the Tyrrhenian cycle (Ruíz Gálvez Priego 1986; Harrison 1988). Atlantic tin and the copper of the Rio Tinto sources fuelled this expansion (Rothenberg and Blanco-Freijeiro 1981). Phoenician trading posts (but not yet colonies) were established on the Andalusian coast itself, at Toscanos, Chorreras and Morro de Mezquitilla (Niemeyer 1984), and ironworking begins in the area at this time. An equally important element of new technology would have been cupellation for the extraction of silver.

Staging posts for Phoenician, Greek and north Syrian trade with Italy have not yet been recognized, though scattered imports, geographical logic and the siting of later Greek colonies would suggest their existence in Calabria (e.g. Francavilla Marittima) or eastern Sicily. The character of their activity within the Tyrrhenian area, however, has been illuminated by the settlement and cemeteries at Pithecusae on the island of Ischia in the bay of Naples (Buchner 1982; Ridgway 1971). These show a polyethnic trading community including north-west Syrians, Euboeans and elements of the native population. Imported objects include Levantine amphorae and unguent-flasks, numerous seals of steatite and

faience, together with Levantine Red Slip bowls and Greek (mostly Corinthian and Euboean) painted cups. Locally made wares include some with Aramaic inscriptions; the bronze dress ornaments are of local (Villanovan) types. Bellows-nozzles and slag testify to the local working of iron, possibly obtained from the rich sources on Elba in northern Etruria, and (as in Euboea itself at an earlier period) the introduction of this technology was an integral part of early trading activity. A scatter of imported pottery and seals occurs in tombs within Campania, Latium and Etruria; and the role of this typical offshore trading community was primarily to make contact with indigenous exchange systems. The position of this trading-station in Campania, far south of the focus of indigenous prosperity in Etruria (with its plentiful bronzework and close links both to central Europe and Sardinia), suggests that such activity was still being kept at a distance by powerful local interests. By the end of the century, dynastic rich tombs in southern Etruria testify to the growth of political power there, while the infrastructure of Aegean and eastern contacts had been strengthened by the foundation of Euboean settlements on good harbours in north-east Sicily and on the coast opposite Ischia at Cumae (just as Euboeans were also expanding in the Aegean, to the northern peninsula of Chalcidice). Soon other communities joined the western trail, infilling and leapfrogging along the route: Corinthians, Rhodians, Megarians and Cretans, with Achaeans perhaps exploring overland routes across Calabria; some of the Sicilian sites, with a temple and agora, can now be described as formal colonies (Boardman 1980).

The eighth century thus saw imperial expansion in the Levant, and economic expansion leading to state formation in the Aegean. Both Levantines and Aegeans tapped the resources of the central Mediterranean, using the advantages of capital concentration and technological expertise in long-distance sailing vessels to make contact with local trading systems, where the sail was probably not widely in use. The introduction to this area of new technologies of metal extraction and manufacture (especially silver and iron), together with supplies of novel mass-produced and bulk products (faience and glass, textiles, oil and wine) and the ideologies which they symbolized, gave traders access to supplies of rare materials such as silver or tin in demand for consumption in the more sophisticated economies of the east. This overseas trading activity retained some of its earlier informal character, with competition probably taking the form of rival trading partnerships rather than the conscious exclusion of whole ethnic groups. Nevertheless, a broad division is evident between metropolitan Phoenician (principally Tyrian) and other groupings, and the extension of political control through the foundation of formal colonies indicates a growing differentiation of interests and exclusive definition of routes. The constraints of geography now began to give particular opportunities to communities on constriction points, of which the Gulf of Corinth was to be particularly important.

The great bifurcation: the seventh century (Fig. 1c)

As the Assyrian Empire reached its height, the process of orientalization and the genesis of new states moved westward, to Italy and Spain: but in each case not simply to the south-eastern coasts where Phoenician and Greek contacts were strongest but to the indigenous centres of power which had independent links to a European hinterland. As

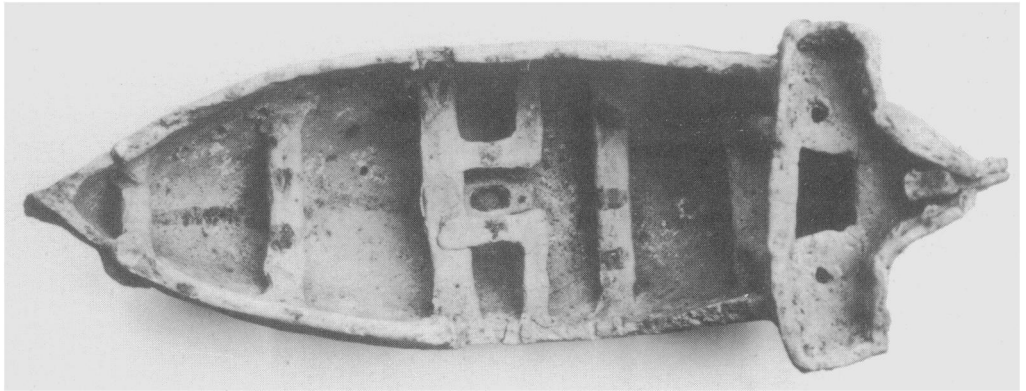


Plate 2 Seventh-century terracotta model of a large merchant ship, from Amathus, Cyprus (length 14cm): British Museum photograph.

the frontier of urbanization moved west, so a new periphery began to be created and ironworking took hold in central Europe, with radical effects on societies still organized around the circulation of bronze. The demands of the Assyrian Empire for tribute from the Levantine cities continued to intensify their western enterprise, while struggles for territorial definition among the network of Greek city-states ensured a growing demand for bronze and iron.

In the maritime traffic which these core areas generated, a new element of competition now emerged. Distribution maps of eighth-century oriental bronzework such as Cypro-Phoenician bowls (Markoe 1985), candelabra with *blattüberfall* ornament (Matthäus 1992: fig. 10), or lyre-player seals show a continuous swath from the Levant to Italy, on the routes discussed above (and often in Aegean sanctuaries); seventh-century Phoenician bronze jugs, or bowls in the later orientalizing style (now more often of silver or gold), show an extended distribution in the west, separated from east Mediterranean finds by a large, Greece-shaped hole (Markoe 1985; Matthäus 1992: figs 11, 14). These patterns suggest that local production now replaced many previously exotic goods, and that Phoenicians were now perhaps being effectively excluded from trade routes across the Aegean, with territorially based ethnic consciousness taking a harder edge.

The seventh century also saw a growing integration of maritime and inland areas, and especially an articulation between Anatolia and the eastern Aegean seaboard reflected in the growth of Ionia and Lydia with their links along the Maeander and Hermus – the latter with a rich electrum source on its tributary the Pactolus. The Greek communities on the eastern side of the Aegean, in Ionia and Rhodes, expanded their role in the production of oriental types of metalwork, perfumes and textiles – and also in painted pottery, which was both a commodity in its own right as drinking sets (ornamented with figured textile patterns!) and a decorative container for organic products. Links with north Syria were not lost, and Ionian pottery was exported there in quantity to the exclusion of Cypriot wares. Equally important was the westwards trade, both to mainland Greece and – funnelled through the isthmus of Corinth – to consumers in Italy. The volume of traffic on this major

artery from the east Aegean provided an opportunity for the addition of value-added manufactures: either the relatively bulky products represented by amphorae with painted SOS decoration, or the labour-intensive perfumed oils and containers made in Corinth, which now rose to special prominence as a result of its unique position in this network of trading contacts. Corinth is likely to have developed metalworking and textile production, though it is pottery which is the most visible archaeological evidence of its industrial production and trade – especially the decorated alabastra and aryballoi used as perfume containers but also the less intensively studied amphorae (Salmon 1984). This area led the process of capital formation and advanced technological production on the mainland, following the lead of the eastern Aegean.

The Phoenician sphere in the western Mediterranean developed greater diversity, both through bulk production of commodities such as dyestuffs and fish preserves at coastal factories in Iberia and through the growth of the native state of Tartessos in the lower Guadalquivir valley (Harrison 1988). A similar process of growth occurred around Carthage, which became the advanced manufacturing node of an area which now developed an increasing economic autonomy. In Italy, states developed around the major cities in the core area of southern Etruria, and their indigenous shipping plied the Tyrrhenian routes both to exploit their own hinterland in Sardinia and Liguria and to interface with Phoenician and Greek colonial traffic. Northwards, their periphery was constituted by the Po valley and Slovenia, by which European high-value materials such as amber reached Etruria and the Mediterranean. A further area of penetration, this time by Greeks alone, was the Black Sea – a natural extension of the interest in the gold and silver sources of the northern Aegean, and perhaps with a phase of pre-colonial activity before the formal settlements by East Greeks on the metal-rich northern shore of Anatolia, with their links to the interior. This area was to become important in the next century, with the rise of the Iranian world and the further development of overland routes.

Intensification and outflanking: the sixth century (Fig. 1d)

The pattern of the following century can be briefly sketched. As in earlier periods, the increasing scale of the Near Eastern economy was a powerful motor of growth throughout the contemporary world-system: the temporary dominance of Babylon and the rapid growth of the Median and Persian Empires brought a new scale of integration from the east Aegean to the Indus. Specialization in production at this time is graphically illustrated by Ezekiel's (Ezekiel 27: 12–23) description of the commerce of Tyre, 'merchant of the people for many isles', with its zonation of agricultural and animal products from a large Levantine hinterland (grain, oil, honey, resin, wine, wool, sheep, goats, horses, mules), bronzework and slaves from Anatolia and the Aegean, metals from the far west and exotica from the Red Sea (Liverani 1988: fig. 129). The new centres in the central and west Mediterranean were by this time producing and exporting their own commodities in bulk: Etruscan amphorae occur from Sicily to the Golfe du Lion (Cristofani 1986: pl. 11). In this century, too, an extensive central European hinterland appeared in the Hallstatt D period. The Aegean area passed an important threshold, in which cities were no longer agriculturally self-sustaining and had to be supported by imports of grain – paid for, in

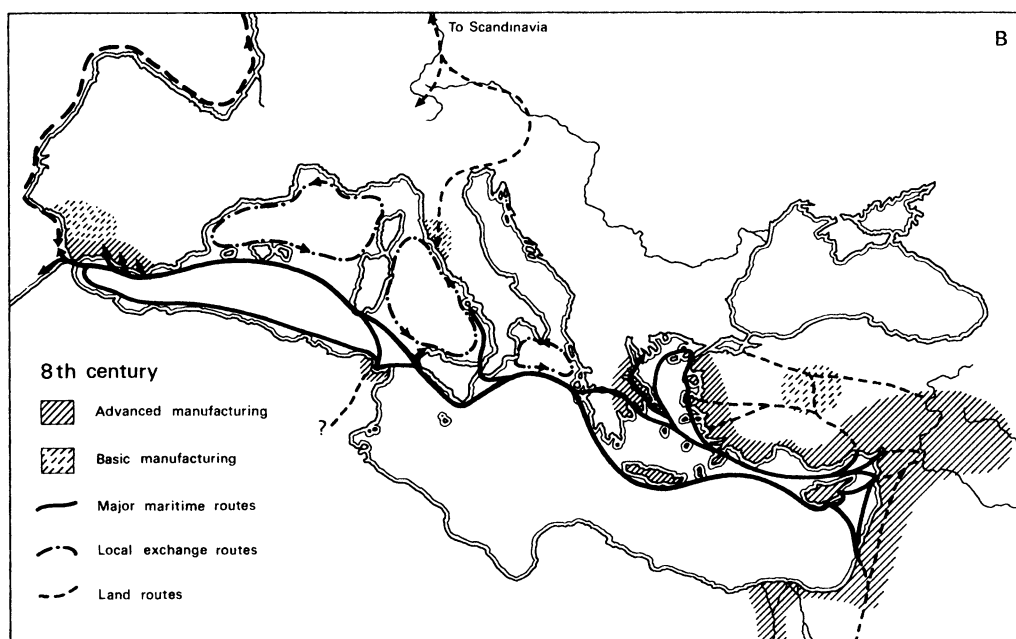
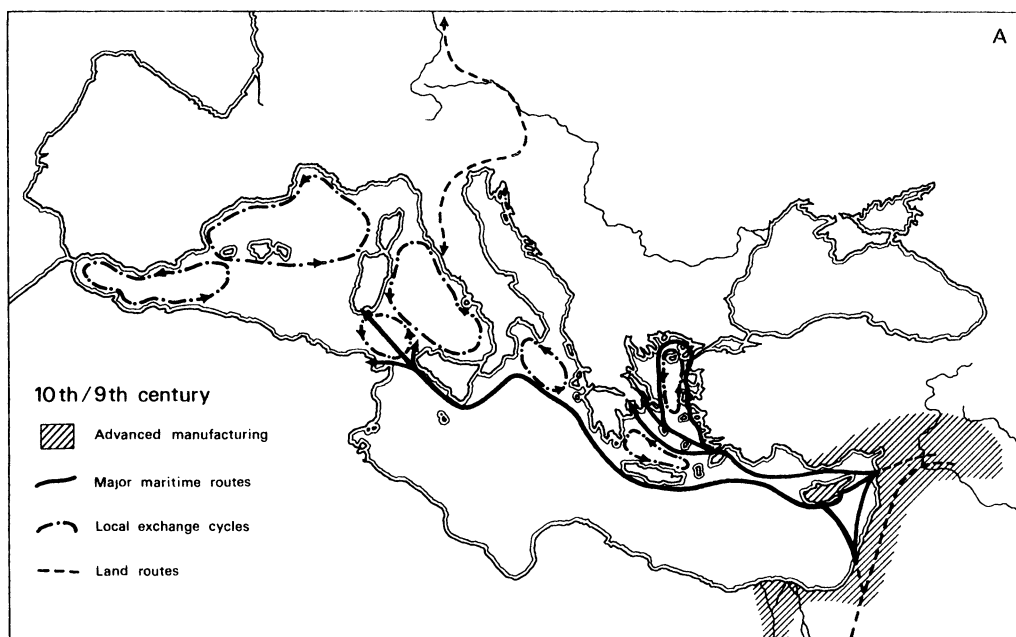
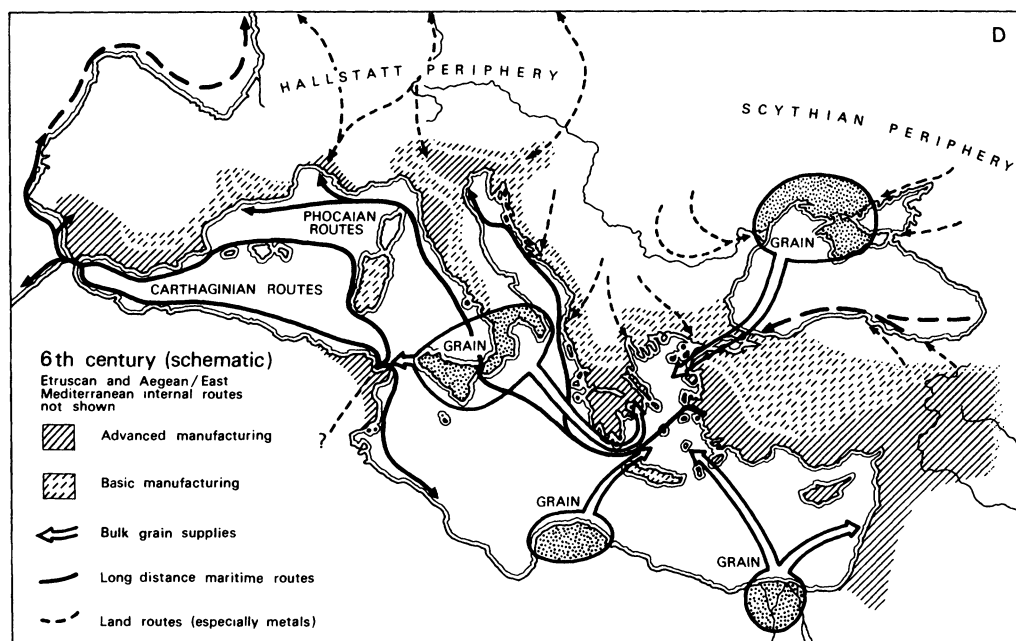
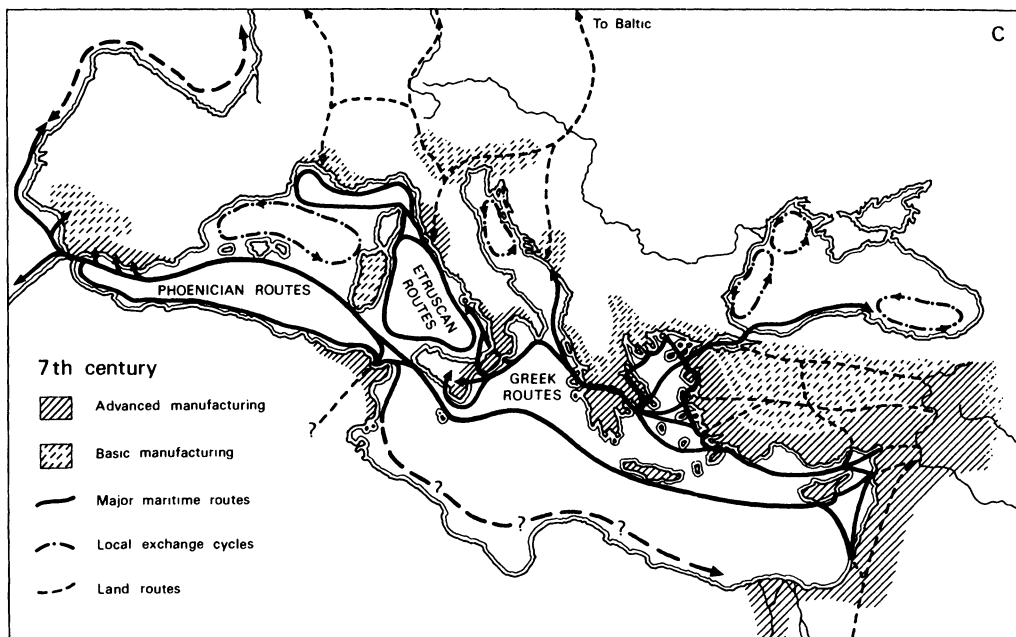


Figure 1 Comparative maps of the development of Mediterranean maritime trade and regional economic growth, 1000–500 BC. Map (d) is simplified by the omission of east Mediterranean and Etruscan routes, but indicates the growing regional specialization in production.



part, by exports of silver. The larger vessels needed for such a scale of transport altered the nature of the maritime network.

The growing differentiation of the east Mediterranean economy as a whole required an increase in liquidity to balance the complexity of inter-regional exchanges; silver, now available in quantity, became not just an important high-value consumable but also a commodity in regulating flows of produce and accounting payments of tribute. Flows of bullion and the use of weighed units had been a feature of the expansion of urban economies from the beginning, and inscribed castings in unitary weights are known from the eighth century in north Syria (Balmuth 1971). Punched units of locally produced electrum (and soon afterwards gold and silver separately) were struck at Sardis in Lydia in the early sixth century, and comparable issues soon appeared on both sides of the Aegean in silver-producing areas; coins were also struck in Sicily, southern Italy and Cyrenaica by the end of the century. East Greeks, with access to north Aegean silver sources, could tap the breadbasket of Egypt, where the trading community at Naucratis (occupied from the late seventh century) could acquire surplus grain for cities with limited agricultural resources of their own. Further supplies could be obtained from agricultural colonies established in Cyrenaica and from comparable settlements now established on the Black Sea coasts. Athens, with the advantage of an indigenous source of silver (Lavrion/Thorikos), could make use of the Sicilian colonies, which increasingly specialized in grain production.

The large vessels suitable for grain transport could no longer pass across the Corinthian isthmus and the westward passage now perforce used the route round Cape Malea. The effect of this new pattern of bulk transport is reflected in the striking shift in pottery exported to Italy in the mid-sixth century, from Corinthian and East Greek wares to Attic (Martelli 1985; Cristofani 1986: fig. 13), as economies of scale (rather than aesthetic criteria!) favoured these complementary manufactured cargoes. A further and equally significant twist to this topic is given by Herodotus' account of the Phocaeen intervention in the west Mediterranean, which he says involved the use of warships (*pentekonteres*) to penetrate around established interests and reach the Adriatic, Tyrrhenia, Iberia and Tartessos directly (Herodotus I: 163; Shefton 1982). Now, where necessary, overcoming opposition in naval battles, this movement outflanked Etruscan Italy by reaching the main outlets of central European trade directly, at the head of the Adriatic (Spina) and the mouth of the Rhone (Massalia), as well as contacting the Atlantic world in the far west. The chain of long-distance contacts ran continuously from the borders of Media to the Celts (Kimmig 1983; Nash 1985).

Conclusion: patterns of development

In 1000 BC most of the Mediterranean was effectively prehistoric; by 500 BC it formed a series of well differentiated zones within a world-system. The transformation did not take place by the passive diffusion of 'civilization', but by active intervention and response. Local maritime exchange cycles and routes of long-distance trade were already in existence, and the centres of future growth were already evident; but what articulated them into a single interacting system was the input of capital from the east. Large sailing

vessels, and the economic organization which made them possible, drew together the fortunes of communities throughout the Mediterranean.

This maritime expertise and capital concentration came initially from Phoenicia, and Phoenician vessels were probably the largest ships plying Mediterranean routes until the later seventh century. Phoenicia was also characterized by other features of advanced urban economies: the use of silver as a medium of exchange, slavery and the labour-intensive manufacture of textiles and perfumes. The Phoenician trading diaspora created contacts with societies at very different levels of social and economic organization; temples and sanctuaries formed important meeting points between the different economic systems of Phoenician and indigenous groups. In the Aegean, close trading-partnerships along the main artery of contact with north Syria led to the adoption and cultural transformation of this pattern; in north-west Africa and Iberia, a colonial culture was established. Two areas of indigenous culture resisted this process and participated on their own terms: Etruria and Tartessos. Both were important termini of routes into the European hinterland, in central Europe and the Atlantic respectively. The Aegean area, too, established trading and colonial links with the west and increasingly in competition with the Levant; from the sixth century onwards it became increasingly concerned with grain supplies, using local sources of silver and a new pattern of colonial interests to support urban growth.

The geographical pattern which emerged was a primary zone of capital- and labour-intensive manufacturing, from the Levant to the southern Aegean, surrounded first by a zone of higher value agricultural products (oil, wine – especially in the north Aegean, e.g. Chios, Thasos) and then by a grain-growing belt in Cyrenaica, Sicily/southern Italy and the Black Sea. Beyond this, separate centres of manufacturing, with their own supply zones, came into existence in Etruria and Tunisia, again with a complex pattern of competition as the more heavily capitalized areas of the east Mediterranean tried to outflank their control of the rich hinterland of temperate Europe.

Neither diffusion nor autonomy can adequately describe the nature of this process of growth; rather, the pattern of development can best be described as co-evolution within the extending limits and zonation of a growing world-system.

Acknowledgements

We are grateful for helpful comments from John Boardman, Stephanie Dalley, Chris Howgego, Andres Reyes, and Michael Vickers, and to Veronica Tatton-Brown for help with photographs. The maps are by Nick Griffiths.

21.vi.92

*Ashmolean Museum
University of Oxford*

References

Bakhuizen, S. C. 1976. *Chalcis in Euboea: iron and Chalcidians abroad* (Chalcidian Studies 3). Leiden: Brill.

Balmuth, Miriam 1971. Remarks on the appearance of the earliest coins. In *Studies Presented to George M. A. Hanfmann* (eds D. G. Mitten, J. G. Pedley and J. A. Scott). Mainz: von Zabern, pp. 1–7.

Barber, E. J. W. 1991. *Prehistoric Textiles: the development of cloth in the Neolithic and Bronze Ages*. Princeton: Princeton University Press.

Boardman, John 1980. *The Greeks Overseas: their early colonies and trade*. Enlarged edn. London: Thames & Hudson.

Boardman, John 1990. Al Mina and history. *Oxford Journal of Archaeology*, 9(2): 169–90.

Buchner, G. 1982. Die Beziehungen zwischen dem cuböischen Pithekoussai auf der Insel Ischia und dem nordwestsemitischen Mittelmeerraum in der zweiten Hälfte des 8. Jahrhunderts v. Chr. In *Phönizier im Westen* (ed. H. G. Niemeyer). Madrider Beiträge 8. Mainz: von Zabern, pp. 277–98.

Coldstream, J. N. 1982. Greeks and Phoenicians in the Aegean. In *Phönizier im Westen* (ed. H. G. Niemeyer). Madrider Beiträge 8. Mainz: von Zabern, pp. 261–75.

Cristofani, Mauro 1986. Economia e società. In Massimo Pallottino et al., *Rasenna. Storia e civiltà degli Etruschi*. Milan: Scheiwiller, pp. 79–158.

Finley, M. I. 1985. *The Ancient Economy*. 2nd edn. London: Hogarth Press.

Frankenstein, Susan 1979. The Phoenicians in the far west: a function of neo-Assyrian imperialism. In *Power and Propaganda: a symposium on ancient empires* (ed. M. T. Larsen). Copenhagen Studies in Assyriology 7. Copenhagen: Akademisk Forlag, pp. 263–94.

Gehrig, Ulrich and Niemeyer, Hans Georg 1990. *Die Phönizier im Zeitalter Homers*. Mainz: von Zabern.

Harrison, Richard J. 1988. *Spain at the Dawn of History: Iberians, Phoenicians and Greeks*. London: Thames & Hudson.

Hart, Keith 1986. Heads or tails? two sides of the coin. *Man* N.S. 21: 637–56.

Hicks, J. 1969. *A Theory of Economic History*. Oxford: Clarendon Press.

Kestemont, Guy 1985. Les phéniciens en Syrie du Nord. In *Phoenicia and its Neighbours* (eds E. Gubel and E. Lipinski). Studia Phoenicia 3. Leuven: Uitgeverij Peeters, pp. 135–49.

Kilian-Dirlmeier, Imma 1985. Fremde Weihungen in griechischen Heiligtümern vom 8. bis zum Beginn des 7. Jahrhunderts v. Chr. *Jahrbuch des Römisch-germanischen Zentralmuseums*, 32: 215–54.

Kimmig, Wolfgang 1983. Die griechische Kolonisation im westlichen Mittelmeergebiet und ihre Wirkung auf die Landschaften des westlichen Mitteleuropa, *Jahrbuch des Römisch-germanischen Zentralmuseums*, 30: 5–78.

Liverani, Mario 1987. The collapse of the Near Eastern regional system at the end of the Bronze Age: the case of Syria. In *Centre and Periphery in the Ancient World* (eds Michael Rowlands, Mogens Larsen and Kristian Kristiansen). Cambridge: Cambridge University Press, pp. 66–73.

Liverani, Mario 1988. *Antico oriente: storia, società, economia*. Rome: Laterza.

Lombard, M. 1971. *Monnaie et histoire d'Alexandre à Mahomet*. Etudes d'économie médiévale 1. Paris: Mouton.

Markoe, G. 1985. *Phoenician Bronze and Silver Bowls from Cyprus and the Mediterranean*. Berkeley: University of California Press.

Martelli, M. 1985. I luoghi ed i prodotti dello scambio. In *Civiltà degli Etruschi* (ed. M. Cristofani). Milan: Electa, pp. 175–81.

Matthäus, Hartmut 1992. Bronzene Kandelaber mit Blattüberfall: Zeugnisse phönikischer Expansion im Mittelmeergebiet. In *Acta Cypria* (ed. Paul Åström). Acts of an international congress on

Cypriote archaeology held in Göteborg on 22–24 August 1991, Part 2. Jonsered: Paul Åströms Forlag, pp. 214–54.

Morris, S. 1992. *Daidalos and the Origins of Greek Art*. Princeton: Princeton University Press.

Nash, D. M. 1985. Celtic territorial expansion and the Mediterranean world. In *Settlement and Society in the First Millennium BC* (eds T. C. Champion and J. V. S. Megaw). Leicester: Leicester University Press, pp. 45–68.

Niemeyer, Hans Georg 1984. Die Phönizier und die Mittelmeerwelt im Zeitalter Homers. *Jahrbuch des Römisch-germanischen Zentralmuseums*, 31: 3–94.

Niemeyer, Hans Georg 1990. Die Phönizier im Mittelmeerraum. Ulrich Gehrig and Hans Georg Niemeyer, *Die Phönizier im Zeitalter Homers*. Mainz: von Zabern, pp. 97–103.

Pryor, J. H. 1988. *Geography, Technology and War: studies in the maritime history of the Mediterranean 649–1571*. Cambridge: Cambridge University Press.

Ridgway, David 1971. The first western Greeks: Campanian coasts and southern Etruria. In *Greeks, Celts and Romans: studies in venture and resistance* (eds Christopher and Sonia Hawkes). London: Dent, pp. 5–29.

Rothenberg, Beno and Blanco-Freijeiro, Antonio 1981. *Ancient Mining and Metallurgy in South-west Spain*. London: Institute of Archaeology.

Rowlands, M. 1984. Conceptualizing the European Bronze and early Iron Age. In *European Social Evolution* (ed. John Bintliff). Bradford: University of Bradford, pp. 147–56.

Rowlands, M. and S. n.p., Incorporating the periphery: ethnogenesis and the development of complex societies. Conference paper, Novorossisk, 1991.

Ruiz-Gálvez Priego, Marisa 1986. Navegación y comercio entre el Atlántico y el Mediterráneo a fines de la edad del bronce. *Trabajos de Prehistoria*, 43: 9–41.

Rupp, David W. 1987. Vive le roi: the emergence of the state in Iron Age Cyprus. In *Western Cyprus: connections* (ed. D. W. Rupp). Studies in Mediterranean Archaeology 77. Göteborg: Paul Åströms Forlag, pp. 147–61.

Salmon, J. B. 1984. *Wealthy Corinth. A history of the city to 338 BC*. Oxford: Clarendon Press.

Schauer, Peter 1983. Orient im spätbronze und-früheisenzeitlichen Occident. Kulturbeziehungen zwischen der iberischen Halbinsel und dem vorderen Orient während des späten 2. und des ersten Drittels des 1. Jahrhunderts v. Chr. *Jahrbuch des Römisch-germanischen Zentralmuseums*, 30: 175–94.

Shaw, Joseph W. 1989. Phoenicians in southern Crete. *American Journal of Archaeology*, 93: 165–83.

Shefton, B. B. 1982. Greeks and Greek imports in the south of the Iberian Peninsula: the archaeological evidence. In *Phönizier im Westen* (ed. H. G. Niemeyer). Madrider Beiträge 8. Mainz: von Zabern, pp. 337–406.

Sherratt, Andrew and Susan 1991. From luxuries to commodities: the nature of Mediterranean Bronze Age trading systems. In *Bronze Age Trade in the Mediterranean* (ed. N. H. Gale). Studies in Mediterranean Archaeology 90. Jonsered: Paul Åströms Forlag, pp. 351–86.

Sourvinou Inwood, Christiane 1981. To die and enter the House of Hades: Homer, before and after. In *Mirrors of Mortality: Studies in the Social History of Death* (ed. J. Whaley). London: Europa, pp. 15–39.

Wallerstein, Immanuel 1974. *The Modern World-system: capitalist agriculture and the origins of the European world-economy in the sixteenth century*. New York: Academic.

Winter, Irene 1979. North Syria in the Early First Millennium BC, with special reference to ivory carving. Ph.D. dissertation, Columbia. Ann Arbor: University Microfilms.

Wolf, Eric R. 1982. *Europe and the People without History*. Berkeley: University of California Press.
Zemer, Avshalom 1977. *Storage Jars in the Ancient Sea Trade*. Haifa: National Maritime Museum Foundation.

Abstract

Sherratt, Susan and Sherratt, Andrew

The growth of the Mediterranean economy in the early first millennium BC

This article surveys the development of Iron Age trading systems in the Mediterranean. It contrasts the social organization of first millennium trade with that of the preceding Bronze Age, but also points to continuities in the patterns of expansion. Using archaeological and historical evidence, it outlines the growing scale of production and extension of the area where advanced technologies were employed. The routes of maritime trade are related both to factors of competition and to the size of shipping.