Maritime commerce and geographies of mobility in the Late Bronze Age of the eastern Mediterranean: problematisations

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INTRODUCTION

One of the main and long-standing areas of study and interest in the archaeology of the Late Bronze Age (LBA) east Mediterranean concerns the manifest evidence for extensive interregional trade and contact. Whereas early work tended to perceive evidence of 'imports' and influences in terms of migration and conquest (cf. Adams 1968); subsequently such movements of items and influences were conceived more within economic models (from 'diffusion' theories onwards) – what we today can label as trade. Attention to imports/exports has been obsessive through the last century – such items speak of some form of social contacts, of exchange processes, of values and aspirations, and, in general, give some materialisation to evidence for crafting and trade available in the ancient Near East from texts. Just as Evans (1921-45) searched for and tried to identify all sorts of evidence of imports, exports or influences to and from Crete, and Pendlebury (1930) assembled a catalogue of then known Egyptian objects in the Aegean, and Kantor (1947) wrote a monograph exploring connections between the Aegean and the Orient in the second millennium BC, or Stubbings (1951) collected together all the Mycenaean pots found in the Levant, etc., so also in the last decades a number of doctoral theses and publications, and various catalogues of exports/imports, and analyses thereof, abound (e.g. Cline 1994; Leonard 1994; Phillips 1991; Lambrou-Phillipson 1990; Eriksson 1993; Wijngaarden 2002). Hundreds of site reports proudly highlight such items – indeed Catling (1991:10) argued that it should be our main objective to identify and investigate such imports – and a few 'glamour' shipwreck underwater excavations materialise aspects of such trade 'in action' (e.g. Bass 1987; Pulak 1997), and are the subject of awed attention by the entire field. Today even the contents (or in some cases perhaps inner surface coatings) of many of the transport containers (and other ceramic vessels) are starting to be revealed (e.g. Evershed *et al.* 1992; Tzedakis and Martlew 1999; McGovern 2003; Serpico *et al.* 2003).

It might therefore appear, at first glance, that we are getting close, three decades on, to being able to realise the provenance-trade agenda of the 'new archaeology' (compare Renfrew 1969; 1975; discussed below). But the question of what all these lovingly assembled data *mean* is much less clear. The simple existence of most 'imports' is universally accepted (with, in recent decades, scientific provenance work confirming or indeed elaborating many previous views based on visual and iconographic associations and ancient Near Eastern text references). However, the importance of imports in their deposition context – typically but a tiny fraction of total recovered assemblage – let alone in the original overall living context, is often simply assumed, rather than argued. As classic papers by Appadurai (1986) and Kopytoff (1986) highlighted, the static object recovered from the dirt fails to convey almost entirely the potentially rich, polyvalent and multivocal cultural/social life of both the class of object and the specific artefact: its roles and associations in life, and the biographies acquired between manufacture and eventual discard (Gosden and Marshall 1999). We can but guess at the thick-descriptions of ethnography; the identification and roles of 'influences' are of course even less tangible. The modes of movement of many forms of material goods are less than clear; likewise what is, and is not, perceived as special, valuable, or exotic by consumers/recipients as opposed to being perceived as just a class of items or contents either largely or partly irrespective of provenance. Some expensively acquired scientific provenance data may therefore in fact be almost irrelevant to a social archaeology of material culture, in the same way as the name of a hospital of birth is not a useful way to describe a person's overall life. We must therefore consider the hierarchies of value and importance within exchanged items – which were actually exotic, and which were not. Who moved, and where? There is a tendency for archaeologists to treat all non-local items as largely similar – whereas in reality some come from easily accessible locations (even if from overseas and thus deemed

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'imports'), whereas others are truly exotic and/or require specialist skills or costs in the acquisition or local crafting. The latter are now widely recognised as offering an esoteric value resource, which can be used to build and to signify status, roles, and associations (Helms 1988; 1993; Knapp 1998); in some cases the act of acquisition or ability to associate persona with such distance and esoteric concepts/knowledge may have been more valuable than any actual import (Broodbank 1993). But, at the same time, it is important also to remember that in many prehistoric and early pre-modern *established* societies (contrast emergent) the travellers/traders/merchants themselves were usually *not* of high status – despite providing key resources and information (e.g. Trigger 2003:349-350, 629; see also below). They were to an extent 'other', but negatively. Elites controlled and employed the outcomes of trade and movement, with the corollary that they must control and downplay the role of their agents. Status was founded within a society's internal/local criteria.

Such contradictions and changing perspectives underpin the study of ancient trade – with the second millennium BC Aegean-east Mediterranean region the focus here. In this essay we seek to review some aspects of theory and practice (non-comprehensively), and to identify a number of issues and problems. Several culture-historical and formalist assumptions are critiqued, and it is suggested that for practical (fragmentary evidence), and theoretical, reasons a social and relative approach to trade focussing on consumption and reception offers a useful alternative to much current literature.

HISTORIOGRAPHY

The practical mechanics of trade as a system, beyond culture history, have occupied archaeologists for over fifty years. Two areas have been concentrated upon:

(i) the interpretation of specific data sets, through both artefact analysis (stylistic and scientific approaches) and their temporal and spatial distribution, and

(ii) the slotting of such data into coherent theoretical models for the most part derived from, and answering to, concerns raised by disciplines outside archaeology.

The modern agenda was set by Colin Renfrew (1969). In line with the mood of 'archaeology-as-science' of the time (itself a reaction against the largely historical focus of the first century of archaeological thought: see Trigger 1989), Renfrew pleaded for a wide variety of burgeoning scientific analyses (petrology, optical emission spectrometry, optical spectroscopy, neutron activation, infra-red absorption, etc.) to fingerprint a range of materials, from amber to metal to pottery. He argued that the quantitative evaluation of the results obtained would reveal the movement of materials and help delineate patterns of production and consumption. His own work on the provenance of, and hence trading patterns and modalities of, obsidian offers a classic example (e.g. Renfrew and Shackleton 1970).

Considerations of the role of trade in the cultural process as a whole, and for urban development in particular, were not new; they had in fact occupied Classical scholars for some time. Battle (sometimes astonishingly fierce) was drawn between the 'modernists' (or formalists), inspired by Weber (1968), who sought the origins of capitalism in medieval and pre-medieval economies, and who thus argued that modern, Marxist, concepts of production and distribution were applicable to the ancient world, versus the 'primitivists' (or substantivists), inspired by Sombart (1916-27), Bücher (1901) and Hasebroek (1933), who regarded ancient economies as fundamentally different from modern-day systems, and requiring their own models. Fundamentally, the modernists viewed cities as centres of production; primitivists saw cities as centres of net consumption; some, like Hasebroek, advocating the extreme view that ancient economies were household centred, and little exchange took place beyond barter. The social anthropologist Karl Polanyi revitalised the minimalist debate by emphasising that economies are always embedded in non-economic institutions and shaped by socially prescribed activities (1957). Finley took this further (1973), developing the view of cities as centres of consumption, with trade restricted, due to high costs, mainly to luxuries for elite groups. Classical and Aegean archaeology continues to house similar minimalist positions (e.g. Snodgrass 1991).

At the same time, Renfrew (1975) considered Polanyi's ideas in relation to archaeology, focussing in particular to his central interest, that of state formation. Childe (1951), White (1959) and others

held that social growth depended upon an increase in agricultural production, which would lead to a rise in population and create material surpluses that allowed individuals to specialise in particular crafts. This is turn was seen to permit more developed social systems. Renfrew, however, argued that it was *interregional trade* that provided the engine for social development, by stimulating producers to organise and intensify production, and by generating wealth and economic disparities, leading to social stratification. Renfrew identified civilisation by the frequency of exchange of both material and information, defined, again in the scientific spirit of the time, by mathematical formulae (1975:6, 9), and declared that 'there can be no civilization without permanent central places' (p.11). These, he argued, were visible in specific patterns in the spatial distribution of sites across a landscape, beginning with fairly evenly spaced autonomous central places in the 'Early State Module' (ESM). Renfrew regarded the flow of goods and information between ESMs (what he termed 'intermediate trade') as vital to the creation and maintenance of uniformity in a culture, a point little explored when he wrote, but vital to the consideration of trade and boundary maintenance (see below). Renfrew also noted the value external trade can have in augmenting the power of what he termed 'central persons', i.e., those individuals and groups of individuals in central places who control the supply of goods 'such as will readily appear prestigious' (p. 32) (and wisely left undefined) and who, by doing so, accrue to themselves added power and status.

Concerned with identifying Polanyi's ideas of reciprocity and redistribution and their correlates in social systems, Renfrew also considered, from a theoretical standpoint (pp.41-46), an evolutionary model of ten different modes of trade, with a view to identifying them in the distribution of archaeological material. Five (down-the-line, freelance/middleman trading, emissary trading, colonial enclaves, and ports of trade) were capable of moving goods great distances, and thus are of immediate interest to the argument here, although all ten in fact produced the patterns of material from which information about international trade has to be derived and there is no clear relation between fall-off patterns and modalities of distribution (Knapp 1985b). Indeed, the general utility of central place theory, derived as it is from a model of modern, industrial, integrated economics has been cast into doubt (Horden and Purcell 2000:102-103), as has the difficulty of defining settlement hierarchies, or even regions.

Part of the appeal of Polanyi's vision of a redistributive economy lies in the difficulties archaeologists have in identifying markets on the ground. Renfrew (1972; 1975, followed by Killen 1985) was able to argue for the centrality of palace-based redistribution systems to the Aegean economy, and similar views prevail in the Near East (e.g. Heltzer 1998; Kemp 1989:232-260). More recently, it has been argued that both redistribution and markets operated in the Bronze Age – the latter representing either the potentially subversive activities of individual traders (in terms of their potential to accumulate wealth and influence) or the additional entrepreneurial activities of traders employed for elite trade (Artzy 1997), as opposed to the highly-organised ruler-centred operations of the former (Sherratt and Sherratt 1991; Sjöberg 1986).

Mauss' definition of exchange as a 'total social phenomenon' (1990), was every bit as embedded in the psychological and political fabric of the community as Polanyi's definition of redistribution. Although, in Bronze Age contexts, it is usually restricted to considerations of high-level gift exchange (see below), equivalencies of value are at the centre of many discussions of ancient trade (e.g. Heltzer 1978, Janssen 1975). The social impact of long-distance trade will be discussed below; nevertheless, it should be noted that these types of approach formed the basis for many of the studies of the east Mediterranean discussed below, with a somewhat all-or-nothing tendency to define economies as either reciprocal or redistributive (whereas, among other caveats, contrasting economic forms may co-exist within the same society: Knapp and Cherry 1994:125 and refs.).

STUDY OF EAST MEDITERRANEAN TRADE IN THE BRONZE AGE

For the east Mediterranean, studies of trade (for reviews, see e.g. Knapp and Cherry 1994:123-155; Knapp 1985a) have been of two basic types:

(i) those that relied in the first instance upon an historical reconstruction of events, and which tended therefore to emphasise the shifting prominences (even thalassocracies) of a Minoan, Mycenaean, Egyptian or Syrian cast (summarised and critiqued in Knapp 1993; Knapp and

Cherry 1994:128-134), but which did not always take account of the practicalities of production and consumption, and

(ii) those that, following on from Renfrew, developed anthropology and economics-based models, but without necessarily integrating historical detail into the general picture.

While few would argue for a thalassocracy any more, much energy was expended in refuting such arguments, largely drawing upon the kinds of quantitative analysis and/or scientific examination that Renfrew advocated. There has been extensive work on the fingerprinting of copper (e.g., Gale 1991) and its role in the eastern Mediterranean economy (e.g., Muhly, Maddin and Stech 1988). In Egypt, the types and distribution of Minoan (Kemp and Merrillees 1980), Cypriot (Merrillees 1968) and Mycenaean (Hankey 1981; Bell 1982; 1991) pottery have been studied in detail, as has the profile of Mycenaean (Yannai 1983; Leonard 1987, 1994; Karageorghis, Yon and Hirschfeld 2000) and Cypriot (Gittlen 1977, 1981**;** Bergoffen 1989; 1991; Artzy 2001) pottery in the Levant. Cline (1994) and Lambrou-Phillipson (1990) have documented goods from Egypt in the Aegean, and Jacobsen (1994) has catalogued Egyptian objects found on Cyprus. There have also been some attempts at identifying, *inter alia*, the place of manufacture of Aegean Marine Style pottery, Canaanite jars, Bichrome ware and some other Cypriot products or finds, Mycenaean pottery, etc. (for a very few selected examples, see: Mountjoy and Ponting 2000; Serpico *et al.* 2003; Knapp and Cherry 1994; Mountjoy 1993; 1999; Crouwel 1991; Hein *et al.* 1999).

Anthropological studies of gift exchange and conspicuous consumption were brought to bear upon the east Mediterranean stage (see Knapp and Cherry 1994 for a comprehensive survey). The rich tributes referred to in, for example, the Amarna Letters (Moran 1992), were reinterpreted as high-level gift exchange between the dominant powers (e.g., EA 14) and, on a more one-way-level, between the great powers and their vassals (Liverani 1990). Such transactions were highly formalised and designed to emphasis the personal and the exclusive as a demonstration of prestige, largely by established leaders, although it is almost certain that gift giving was a regular, if less documented, form of exchange at all levels of society. Certainly high-ranking officials at Ugarit exchanged gifts with their counterparts abroad (Heltzer 1978; Zaccagnini 1973; 1987).

But gift exchange, glittering or no, was by definition restricted, and, by nature of the distances involved between polities (when the time lapse between letters amounted to years – e.g. in the Amarna correspondence) could not, in strictly commercial terms, have accounted for the bulk of trade, and certainly not enough to have provided the engine for social change accepted by theorists. Clearly a commercial network also operated, sometimes on a considerable scale, as attested to by the richness of the Uluburun shipwreck and the vast quantities of copper therein (although just how vast or abnormal a cargo this was depends upon whether the emphasis is placed upon the metal [= royal/elite] or the ceramics and scrap [= merchant]). The exact nature of long-distance east Mediterranean commercial trade is still highly uncertain given current evidence. It certainly operated even at a state level (e.g. EA 35), but at the same time merchants seemed to be able to operate on their own account to a certain extent. In Egypt, for example, traders, including foreigners, were attached to the temples; at the temple of Osiris traders dealt in gold, silver and copper, seemingly the products of the temple workshops (Castle 1992:250-251), and appeared to own ships on their own account (p.248). The Tomb of Qenamun (de Garis Davies and Faulkner 1949) depicts three traders at the quayside in Thebes (?), waiting to greet Syrian traders on their ship, two of them with small balance scales in hand, generally taken to indicate trade including in precious metals (Castle 1992:253). At Ugarit, the state controlled most of the trade in the kingdom, but there is evidence that at least some *tamkaru* could accumulate wealth through trade on their own account, and would pool currency for joint commercial operations abroad (Heltzer 1978:121-8, 139-42). Artzy suggested that state and freelance trade can be distinguished by the type of shipping utilised: long boats for the former and round, i.e., shorter, vessels for private ventures (Artzy 1985; 1988).

However, a more *ad hoc* trade system can also be distinguished, in which individuals on state or large-scale commercial missions conducted small-scale transactions on their own account (Artzy 1997). The activities at 'Bates' Island', a seasonal revictualling station off Marsa Matruh, in the western desert of Egypt, bear witness to this: pins and other small metal items were cast on the spot and doubtless on demand, presumably in return for food, water and ostrich egg shells (White 2003; Hulin 2003, *contra* Sherratt and Sherratt 1991:358 and others who upgrade the very small facilities into a major node between Egyptian and island systems, and imagine a harbour capable

of taking large-scale ships). Similar evidence for low-level smithing and Cypriot and Aegean material is also attested at Zawiyet Umm el-Rakham (Snape 1998; Thomas 2000). As Horden and Purcell (2000:123-172) argue, such trade patterns can have considerable persistence outwith the main directed elite trade concerns of the time; in the cases of the last two sites we see indications that their activity in fact bridges the LBA collapse and then pickup of Iron Age activity. Some sites on Cyprus also seem to bridge this transition, e.g. Enkomi, indicating they were not solely dependent on the elite palatial trade, but had a basis in either persistent, or changing, lower level economic patterns. However, before separating such trade networks entirely, it is also important to note that it was possible for all types of exchange — gift giving, state and individual trading — to occur, sometimes in the same venture: the massive quantities of copper found on the Uluburun shipwreck (10 tons) alongside timber, scrap metal and pottery, plus small balance scales demonstrate this (summarised in Pulak 1997).

PRESTIGE, STATUS AND IMPORTED GOODS

The possibilities for individuals to accumulate wealth and status independent of the patronage of the state – and specifically elite individuals – is germane given the standard argument that the incentive for long-distance trade was fuelled by the desire for emergent elites to acquire goods though which to express status and prestige. Sherratt and Sherratt (1991), influenced by Sombart (1916-1927; 1967), Veblen (1899), and Douglas and Isherwood (1979), refined Renfrew's model by focussing upon consumption, rather than production, arguing that the demand for convertible resources (especially metal) provided the incentive to intensify and further organise production, and this led to surplus wealth on the part of the producers, who became consumers of goods themselves. The 'prestige market' was initially fed by low-bulk essential and prestige/luxury goods, but expanded with the success of the metals trade to include other 'non-convertible', and to a certain extent archaeologically invisible commodities, e.g. pottery and their contents, textiles, etc. (for a review of the range of perishable goods in circulation, see Knapp 1991) and became part of the language of status expression. Finally, Horden and Purcell (2000:123-172), stress the significance of short-hop *ad hoc* low-value commodity trade (Braudel's 'cabotage'). In fact, *contra* Sherratt and Sherratt (1991), Edens (1992), etc., they regard the high-prestige trade as an outgrowth of ordinary trade, and not *vice versa*, and argue that the vicissitudes of the former say nothing about either the persistence or importance of the latter. While relevant to the developed Late Bronze Age world and its collapse and re-orientation in the Iron Age (as noted in the previous paragraph), this appears not to be the case when considering the first *development* of *longer*- and *long*- distance trade in the prehistoric context (versus local networks), where the evidence indicates that long-distance began with portable low-bulk essential (if utilitarian) goods (Perlès 1992), and prestige/luxury/esoteric goods (e.g. Broodbank 1993) (even if as symbols enabling access to subsistence-related resources: Halstead 1989). On an inter-regional scale across the east Mediterranean and Aegean, there is no evidence for large(r) deep draft ocean-going sailing ships with plank-built hulls, masts, and rigging until the end of the third Millennium and/or the start of the second millennium BC (Broodbank 2000:342-243) – this change in technology represents (potential) access to maritime worlds of entirely differing orders of magnitude (also Cherry 1984:30; Sherratt and Sherratt 1991:367). The first is local to regional, the second is regional and inter-regional. The first is small-scale; the second is bulk. The first has limited operating times and directional flexibility; the second has year-round capability in all directions. The first requires few facilities, the second requires anchorages and ports and a supporting complex society capable of providing capital investment and specialists (Broodbank 2000:345-347). For the Aegean, such interregional trade seems likely to correlate with the emergence of the first palaces on Crete ('proto'-palaces and new structures from Early Minoan III-Middle Minoan IA, and the Old Palaces proper from Middle Minoan IB), and, as often argued, it seems likely that the elites centred in these structures initiated and controlled (and restricted) such early long-distance trade (Niemeier 1998b:36 with refs.). A likely key resource for Old Palace Crete acquired via this new long-distance maritime avenue was the acquisition of tin at the far western end of an established Near Eastern distribution route (Niemeier 1998b:36-37). At this time/stage (and within the context of a moderate level of complexity, typically complex chiefdom, early state, or the like), we have moved to the potential for commodity trade, and for specialist traders (merchants) operating within some form of administrative-bureaucratic context (as attested for example in early Mesopotamia: Postgate 1992).

Thus we must distinguish system creation from subsequent persistence. Consideration of early

long-distance trade immediately brings us to the 'other' – something held to have almost independent explanatory force in a number of recent studies. We stress the need to consider 'other' only as locally constructed and relevant; for example, a small-scale island society where travel is a biological imperative and cultural backbone will conceive of 'other' in very different terms to a largely self-sufficient agrarian-based settlement and population. The general social values of the former will include 'other' as highly relevant (e.g. Broodbank 1993; 2000); whereas those at the latter may not, unless it is expressed within or via their other local mores.

THE OTHER

The history of early modern to modern (colonial) Europe led to the creation of an 'other' in the Orient: Said (1978) famously conceptualised this as 'orientalism', an imposed set of 'western' views which sought to isolate, control and explain orientals. Difference was at the heart of this constructed divide: 'the Orient … had been since antiquity a place of romance, exotic beings, haunting memories and landscapes, remarkable experiences'; for Europe (and the 'west') it was antecedent and antithesis '…cultural contestant, and one of its deepest and most recurring images of the Other' (Said 1978:1). Faded glory was integral. This postcolonial divide has carried into the development of Mediterranean prehistoric archaeology, and doubly so, given the specific acknowledgement in western history since at least Herodotos of the glory and much greater antiquity of the most ancient east. The Near East has inevitably been seen as a powerful 'other' to the early history of Europe, a potential source and contrast, with great value therefore placed on relations and contacts between one world and the other. The dangerous allure and magic of the orient, controlled and distanced in the colonial world, could be given free reign in the archaeology of the distant past: *ex Oriente lux*. The prehistoric Mediterranean in simple terms saw the reverse of the modern world: core advanced civilisations in Egypt and the Near East, with the east Mediterranean forming a periphery that was gradually brought into this greater arena. It was therefore all too inevitable in earlier work to explain history in terms of the spread/diffusion of civilisation out from the orient and to highlight all and any instances of imports/exports between the core and periphery, as if they explained by their mere existence. Such exchanges and links from periphery back to the core even provided the chronological framework for history – in an entirely reinforcing circular process (cf. Leonard 1988).

But such processes were neither passive nor static nor arbitrary. Today it is regularly argued that 'secondary' entities such as the major centres in the Aegean and on Cyprus, were motivated in seeking and developing contacts with the ancient Orient at least partly because local elites sought to enhance their social and political position through such associations and material correlates. They were thus active receptors and manipulators. A predominance of luxury goods (crafted or the exotic raw materials) as foreign imports would therefore be anticipated (as, e.g., Lambrou-Phillipson 1990:164 finds for the Aegean). In reverse, the 'primary/core' states of western Asia sought these same contacts because they too were stimulated by their own economic and political concerns to secure new and different resources (both primary and crafted). Networks of inter-elite contacts and exchanges sought effectively similar signifiers: crafted, exotic and esoteric goods, and the key economic resources of the age (e.g. metals). Thus, while distinct, the exchange of luxury goods and commodities were often linked (and/or complementary). The 'other' became sets of reciprocal relationships in which certain iconography, images, objects, artists or ideas were exchanged into local contexts – the encoded elements and values traded rested on the contradiction of both common inter-elite modalities and recognised transferences of skills and renown, and the use of acquisition from a distance to create localised 'otherness' and exclusivity. In developed form, we see this in the artistic and ideological *koiné* linking dispersed elites around the east Mediterranean in the Late Bronze Age (e.g. Feldman 2002; Keswani 1989; Knapp 1998; Peltenburg 1991), with different and limited forms of local trickle-down processes.

However, a common problem with the literature discussing long-distance trade and the other is to discuss regional areas, or even just overall groupings we (modern scholars) define, as if they were seen as centralised or corporate entities within modern states and economies: thus 'the Minoans' or 'the elite', etc., are said to do this or that. In reality, all the evidence we have available indicates that in the secondary regions, like the Aegean and Cyprus, and in large areas of western Asia (e.g. the Levant), the political formations were multiple and plural within the larger regions, and also inside even what we usually consider to be 'states' or 'polities' or the like (Keswani 1996; Knappett 1999; Schoep 2002; Hamilakis 2002; 2003; Wright 1995a; 1995b; Cherry 1986). In

turn, different groups (or factions) or families within particular centres engaged in a multiplicity of different and/or competitive practices as part of their own local political and economic arenas. Nonetheless, common themes and contexts may be noted: for example both certain individuals/groups at Akrotiri on Thera in a wall-painting (landscape frieze, east wall room 5, West House), and others at near contemporary Mycenae in a 'Nilotic' cat-chasing-ducks in a papyrus marsh design on an inlaid dagger from Shaft Grave V (Negbi 1994:74-75 and refs.), sought to identify themselves with the esoteric value of 'Nilotic' landscapes and exotic knowledge; and, meanwhile, groups around the circum east Mediterranean employed the wall-painting medium, *per se*, as a key form of encoded expression.

The example of wall-paintings nicely highlights an additional real problem with the 'other', and perceived value and status in east Mediterranean prehistory. Now famous wall paintings were discovered just over a decade ago at Tell el-Dab'a in Egypt (first dated to the late Hyksos period [Bietak 1992], then the early 18th Dynasty and 'fallen off the walls before the period of Tuthmosis III. This result is a conclusive one' [Bietak 2000a:194], but now dated to the Tuthmosid period and likely the early part of the reign of Tuthmosis III [Bietak 2003:Fig.1]). These paintings looked broadly similar to Aegean examples. This led to the attribution of this art to 'Minoan' style or similar production. Dynastic marriages, exchanges of artists, and so on were proposed and discussed; chronological and conceptual problems led to some ingenious proposals (e.g. Warren 1995:4-5), rather than basic critique. But more sober reflection leads to questions. Although the Tell el-Dab'a examples were (and are still) often linked to the unique body of art known from Thera buried by the volcanic eruption (Bietak 2003:29), in fact some now speculate that later LMIB/II or indeed Mainland Greek art may also offer as good or better associations. Others note that the wall paintings at Tell el-Dab'a in fact exhibit some characteristics not easily paralleled in Minoan art (e.g. scale and gaze of bull's head, use of red background, use of large-scale male figures and mixed use with small-scale figures) (and even Aegean art – especially the use of yellow skin colour), and thus the idea of their being in someway the product of hybridisation emerges (Shaw 1995), along with clear Egyptian antecedents/influence for some elements (e.g. Morgan 1995:38). Finally, there is the fundamental question of whether the Aegeanocentric identification was ever the only possibility. Elaborate and figural wall-paintings have a long ancestry in the Near East. Frankfort (1996:124) wrote: 'there is no reason to doubt that the walls of public buildings were often decorated with paintings'; and, since he wrote his original text, some fragments he considered Middle Bronze Age have been reconsidered as earlier (Ur III period or early Middle Bronze Age: see p.424), only emphasising the point. In Egypt too there was a long pre-New Kingdom tradition of wall-paintings and relief – although much has been lost; the remains from, e.g., the provincial site of Beni Hasan point to what else must have existed (Newberry and Griffith 1893-1900). We are largely ignorant of the Levantine tradition, except as known from the major sites of Alalakh, Tel Kabri and Tell el-Dab'a (Niemeier and Niemeier 1998; 2000; Bietak 2000b). As E. Sherratt (1994:237-238) suggests, one wonders if it is but the fortuitous pattern and history (who found what first) of extant data recovered by archaeology (the relatively good knowledge of relevant Aegean mural art, versus the major gaps in knowledge in areas of SW Asia due to the modern politics and problems of the post-colonial region) that led us to seeing this art as unquestionably a Minoan export (Bietak 2000a:195-200; 2000c) – rather than perhaps seeing the Aegean as the western edge of a common zone of expression that maybe had its home in western Asia (as also, for example, that supposedly quintessential 'Minoan' motif of bull-leaping: Collon 1994) (E. Sherratt 1994:237-238; Knapp 1998). Nor is this a new thought: Shaw (1967; 1970 and pers. comm.) and also Immerwahr (1990) have long noted the probable influence of Egypt painting in the creation of the Aegean tradition. We are perhaps seeing part of that extraordinary fusion ('conflux of impulses from various sources': Furumark 1950:219) that occurred in the Near East broadly during the Second Intermediate Period; in this regard one may note with interest a recent report on an Egyptianising mural in an MB public building at Tell Sakka (Taraqji 1999). Thus the direction of otherness, and the role of *which/whose* 'other', needs careful analysis on a case-by-case basis.

SPACE AND PLACE AND THE OTHER

In the case of the Mediterranean, it is important to recognise the sea as a facilitator, as much as a barrier – thus centres on sea trade routes were in effect highly accessible and very much inter-linked. Adapting a well-known map of Mediterranean inter-visibility (Chapman 1990:fig. 262 (after Schüle), reproduced in Broodbank 2000:fig. 4 and Horden and Purcell 2000:127), our

Figure 1 shows the eastern Mediterranean in terms of visibility from land/sea. This highlights that only the central east Mediterranean was an isolating sea, entirely out of sight of land – in contrast the entire Aegean offers sight of land (unless in bad weather). Such a map illustrates nicely that issues like the colonisation of the large islands of Cyprus and Crete, and the other smaller islands of the Aegean, do not therefore relate primarily to non-visibility or lack of knowledge of existence by humans living on surrounding mainland or other islands, but instead to the ability of humans to survive given available resources on such islands (limited in general, and more so on the smaller islands), or to be able to bring economic strategies/technologies to make such settlement attractive and possible (Broodbank 2000:68-143). In contrast, the nature of 'distance' between the Aegean (and especially Crete, the nearest point in the Aegean) and the Near East is illustrated – it involves a large expanse of remote sea. A direct (i.e. shortest) and favourable (in terms of wind directions and sea currents) sea voyage from Crete to Egypt (or north Africa and along to Egypt) involves considerable travel out of sight of land – and thus requires more sophisticated navigation skills to achieve a target (on which, see Wachsmann 1998:299-301) – not to mention a certain mentalité. Even the drop down to North Africa route (marked by arrows) involves sailing clear of sight of land and only seems 'easy' in retrospect, once the route has been achieved and is known. The conceptually easier route, if far longer, is east via Rhodes along the north coast of Cyprus and then down the Levant, with at no time the need to leave sight of land (and constitutes a route map once done a first time). Critically, unlike the route to North Africa, this could be explored and developed incrementally; it involves no voyage into the unknown (this applies either way: people exploring from the Levant into the Aegean or from the Aegean into the east Mediterranean). But it is much farther and with intermediary civilisations.

It is perhaps no coincidence that the earliest Aegean exports/influences seem to occur along such a chain running from the southeast Aegean to northern Cyprus (Manning 1995a:88-91, 108-109) and the Levant, and then finally Egypt (Branigan 1966; 1967; Warren and Hankey 1989:130-135; Merrillees 2003). Whether either 'end' of this chain met directly before the middle of the second millennium BC is debated – representations of Keftiu (Minoans/Aegeans) from the reign of Tuthmosis III (Vercoutter 1956; Wachsmann 1987) would seem unquestionably to indicate some form of direct contact by the 15th century BC, and the evidence from Kommos in south Crete likewise points by the Late Minoan period to direct Crete-Egypt and vice versa trade (Watrous 1992:172-173, 175-178). Some scholars have advocated that the Minoans mastered the open ocean route earlier, at least during the first half of the second millennium BC (Warren 1995:10-11), and that this perhaps made them special in this regard (Wachsmann 1998:297-299); others have argued the opposite. The 'miniscule amount of Minoan pottery' at the site of Marsa Matruh (Warren 1995:11; for discussion of the site's character, see below), the obvious 'drop down' route from Crete to North Africa/Egypt, or the 'across and up' route from Egypt/North Africa to Crete, and 'the only natural harbor between Alexandria and Tobruk' (Wachsmann 1998:299), argues rather strongly against significant Minoan trade via this route – especially when contrasted to the plentiful Cypriot, Egyptian and some Mycenaean and Levantine material at the site (and so the later LB3 trade system including the Mycenaean world).

In general, the notable aspect of Aegean relations with the east Mediterranean is their very scarcity in archaeological terms *until* the LB3 period (even for Crete – as Niemeier 1998b:38 argues: the greatest number of Cretan exports, and of commoditised form, e.g., via coarse stirrup jars, may be dated to the LMIIIB period). It can be argued that the Aegean entered the periphery (versus being a margin) of the greater Near Eastern and Levantine world (where significant long-distance trade occurred from the 4th millennium BC onwards: e.g. van den Brink and Levy 2002; Algaze 1993) late in the third millennium BC, when bronze started to be imported into the region, presumably from Anatolia (Nakou 1997), but it went little further. Contacts between Old Palace Crete and the region are much discussed (e.g. Wiener 1987:261-264), with finds especially of Kamares pottery in Egypt a fundamental building block of the chronology and history of the greater region. But the reality is that this evidence consists of around a handful of objects from a time-span of a couple of centuries (Merrillees 2003). Other connections are also quite limited when one quantifies, versus lovingly describes (cf. Warren 1995:1-3). Minoan influence extends across the southern Aegean and to southwest Anatolia, but even Cyprus sees only very limited physical evidence for Aegean contact until *after* Late Minoan I (less than two dozen items to date from four or five centuries: Warren and Hankey 1989:115-116; Wijngaarden 2002:191) (and, in reverse, there are but a handful of Cypriot imports to the Aegean up to and including LMI [Cadogan 1979], and little evidence of definite Cypriot copper exports until later: Niemeier

1998b:36-37); and, as with the Near East, when things change it is not Minoan, but Mainland, Mycenaean, objects that herald a change, starting in the Late Helladic IIA period (Graziadio 1995). Distance may therefore have operated as a powerful and valuable force in the peripheral Aegean in the period up to and including Late Minoan I – until its annihilation in the region-wide 'palatial' era of LB3, when the scale and range and commoditisation of exchanges stretching from the Near East to the Aegean (with now the central and western Mediterranean becoming the western 'margin/periphery') indicates an entirely new trading reality, perhaps prompted by the creation of an empire by Tuthmosis III in the 15th century BC. In this LB3 era (alone?) one may envisage a period of region-wide organised commodity exchanges. This picture offers a potentially important context when considering the development of both Old and New Palace Crete at the western periphery of the ancient world system. As Helms (1988; 1993) has argued, such rare actual material linkages (whether luxury goods acquired from afar, or produced locally by transforming exotic raw materials), influences, esoteric knowledge and associations between the peripheral Aegean and the east Mediterranean would have offered important resources ('kingly things'), encoding images and ideals of status, power and authority, for the construction and manipulation of socio-political position on Crete – both with regard to the Old Palace period (Manning 1994; 1995b; 1997; Watrous 1998) and also New Palace period (Sherratt 1994:237). The peripheral status could, for example, have enabled sufficient access, but also relatively effective monopolisation/exclusion (and restricted inflation), and thus enabled successful longer-term 'prestige goods' strategies built around the use and manipulation of such imported goods or raw materials by emergent elite/factions within the largely agrarian based societies of Crete. And, in reverse, such an emerging position at the peripheral edge raises questions about 'souvenir' production for the core regions when considering especially earlier Aegean imports known from the east Mediterranean (compare Phillips 1998); production and dissemination of some Late Cypriot I material, like White Slip I bowls, raises similar issues. However, in both these regards, it is important to note that local manipulation is central – because these international images are de-contextualised in order that they can travel, and only weakly and stereotypically refer back to the originating culture; such 'foreign' or 'exotic' goods become currency only in terms of the external local context (and not on their own terms/criteria).

In general, however, it is important to note that Cyprus was quite different from the Aegean. As regular maritime trade networks developed in the east Mediterranean during the course of the MBA, ships will have passed along the north coast, and soon after one assumes along the southern coast. On the north coast, with visibility across to the mainland, and a constrained plain between mountain and sea, people will have seen any passing ship (even if not bound for Cyprus) – and in reverse ships will have seen northern Cyprus (and it seems no coincidence that the early long-distance imports from the Early Cypriot and early Middle Cypriot contexts occur in this northern zone: see discussion above; Manning 1995:110, 197-198; Ross 1994b); ships that then explored around the southern coast, with no alternative southern mainland coast to follow, will again have been visible to those living towards or near the coast of southern Cyprus. An external world was entirely manifest and potentially available – elites and emergent rivals had both opportunity and competitive requirement in this regard. Cyprus also offered a key raw resource in copper; exports to Syria are known from the 19th century BC (Middle Chronology) and perhaps earlier (Niemeier 1998b:36). Maritime opportunity was expressed by the Middle Cypriot period both via significant quantities of exports (pottery the main easily identified material remnant: e.g. Johnson 1980; Maguire 1990), and by some 'boat' models (Westerberg 1983:9-11). The transition to the Late Cypriot saw a well-known settlement shift to coastal locations in many areas (Catling 1962), and the island was very much more connected to the mid second millennium BC east Mediterranean than the Aegean. It was a periphery engaged to the core, versus a margin.

ROUTES AND MOVEMENT OF GOODS

If, as we would argue, the proper focus of trade is consumption, then it is necessary to form an idea of the role of imports in indigenous systems, which in turn depends upon the degree of familiarity of a product, knowledge of a landscape, trade, and social constructs of alien/exotic. Possibilities for trade are, in the first instance, shaped by geographical possibility (see discussion above). Thus maritime trade routes are shaped by the exigencies of wind, current, and landfall, which lend a seasonality to an endeavour which bad weather could sabotage entirely. The trade routes (Figure 1), hugging the coastline as much as possible, were once thought to move anti-clockwise around the eastern Mediterranean (summarised by Kemp and Merrillees 1980: 264-84).

The picture is now recognised to be more complex, with ships choosing to follow either an anti-clockwise or a clockwise route, partially or wholly as needs required (for comprehensive reviews, see Cline 1994:91-94; Wachsmann 1998:295-301). A southerly route between Crete and the Libyan coast, and thence along the east Mediterranean seaboard, was also a viable option, especially, but not exclusively, in the autumn. Inter-island trade, from Crete and Cyprus to all points, seems to have been vigorously and independently pursued (Watrous 1992:175-78; Murray 1995:33-43; Shaw 1998:13-27). An important point is that outward and return routes were frequently different, and Braudel (1972:107) argued that destination-conscious shipping is a relatively recent phenomenon. As a result, the *ad hoc* nature of trade has been highlighted by likening the enterprise to tramping (similar to Hasebroek's 1933 'sideline trading'), with multiple transactions along the route as need required (Artzy 1997, Sherratt and Sherratt 1991:357). But, at the same time, it must be recognised that such *ad hoc* movement is mainly plausible within an already broadly established system of destinations; further, core-periphery and vice versa trade may have been more direct. Altman (1988) has also doubted the scenario of multiple stop routes along the Egyptian and Canaanite coast, at least by Aegean ships, arguing that taxation and pilfering (combined with navigational difficulties) would have proved a deterrent. In his view, Cyprus and the cities along the Lebanese coast, provided the main distribution points for Aegean goods (compare discussions below and references in this regard).

The incidence of good anchorage combined with accessibility to inland supply routes, was also a determining factor in the development of stations along the trade routes. However, natural disadvantages, such as the shallow waters of the southeast Levantine coast combined with quantities of sand shifting near shore bottoms, could be overcome. From the MBII period onwards, engineered port facilities were kept workable in the short term by sustained maintenance (Raban 1985). Taking the long view, the success of such coastal settlements were very much linked to the wider fortunes of the region. When the dominant role of the Levant was as a landbridge between more powerful entities to the north and south, then the coast tended to be regarded as merely the western border of this bridge, and consequently neglected. The MB II port facilities, usually linked to a main settlement further upriver closer to the inland routes, may be seen as an attempt by small local elites to capture for themselves trade opportunities denied them by Egyptian-run trade with the north based on maritime or inland, but not coastal routes.

During the Late Bronze Age, the axis of trade shifted, following the intensification of Mediterranean trade networks within the region. Routes followed the currents along the Levantine coast to Cilicia, thence to Cyprus or Rhodes, both significant centres, thence either south to Crete, and back to Egypt and the Levant via the north African coast, or north to the Cyclades and the Greek mainland. Kommos in Crete may have acted as a break of bulk centre between the central and west Mediterranean networks.

Sherratt and Sherratt (1991) argued that initially these long distance networks would have consisted of a chain of linked small-scale exchange cycles, and it is worth considering how the networks grew up from the point of view of the navigators involved. The well-known map of visibility of land from the sea discussed above and shown in Figure 1, reveals the large stretches of Mediterranean water from which land may be seen, at least on a clear day. It is interesting on two counts. When aiming for points of visible land, the mariner had to overcome a pair of obstacles: watergaps and currents, and 'target width'. When aiming for Cyprus, for example, ships may have had to traverse only 43-50 miles if approaching from the north, or 63-67 miles if coming from the east (taken from Held 1993), but approaches from the west, from Crete, for example, could never have been direct, but would have necessitated hopping from visible point to visible point. The map highlights the relative isolation of Egypt and the distance between it and the Aegean (and vice versa): Pharaonic trade *had* to move through the Levant, since it was bounded to the north and north-west by large stretches of water from which no land was visible; south-bound trade from Cyprus and Crete required a smaller leap of faith, for ships would fetch upon the north African cost eventually, and could then (once it was known) tack along the coast (hence the existence of the facilities at Marsa Matruh); all in all the balance of knowledge would not have swung in Egypt's favour. Horden and Purcell (2000:123-172) emphasise that geographical knowledge was sequential; thus ports would have been known in relation to where the ships had just been, rather than where a captain intended to trade; the inhabitants of Tel Nami thus advertised its presence by carving ships into the surrounding hills which were, according to its excavator, easily visible from the sea (Artzy 1997:7-9).

The determining variables of distance and visibility as discussed above are both factors in what might be termed common knowledge, the absence of which defines the mysterious and exotic, which Knapp (1998), following Helms (1988), argued automatically lent an air of prestige to foreign goods. But distance is also a cast of mind. Broodbank (2000:16) introduced the concept of 'habitat islands', comparable to Braudel's 'islands that the sea does not surround' (1972:160-1), or Veth's 'islands of the interior' (1993), i.e., locations that are isolated by virtue of being surrounded by inhospitable or uninhabited land. Certainly parts of Egypt may be viewed in this way: Marsa Matruh, for example, surrounded by the western desert, and arguably the Delta itself, was bounded from a mariner's point of view by a mixture of marsh and desert. But is it possible that, from a *mariner's* point of view, many of the Levantine ports were also terrestrial islands? Certainly the *via maris*, the main Late Bronze Age trade route along the Levantine coast, was brought into being only by Tuthmosis III's interest in accessing the Syrian trade routes, and thus emerged as a conceptual unit (and then only from the Egyptian point of view) after the development of most of the port establishments.

Ports and key urban sites can also function as partial islands; worlds largely separate from hinterlands. This is partly a function of the relative difficulties, costs and time involved in land transport versus water transport (once cargo carrying sailing ships were available to the east Mediterranean – before this donkeys could in fact offer near parity with canoes, and indeed human carriers can be surprisingly effective even over long distances if this is the best available option as evident from the cases of highland Mexico, the Maya and the Yoruba: Trigger 2003:347, 355), partly the local-centred nature of the social values critical to a pre-modern society and its hierarchy, and partly the nature of pre-modern economic markets. Renfrew (1975) in developing the concept of the 'Early State Module' suggested that the practical radius of a terrestrial staple finance system was perhaps 50km, or typically a territory of c.1500 square kilometres; Mann (1986) likewise stressed the limitations of direct rule and transport technologies for prehistoric polities. Although there was clearly much variation (Trigger 2003:92-113), such limits are inherent. Certainly the maximum territorial claim of Ugarit seems to have been no more than 60 km at most, thus local knowledge gained of anywhere outside Ugarit would have been second hand at best, and arguably unnecessary. The merchants who called in would have had even more limited experience of the region, but this would nonetheless have been immeasurably more than the Ugaritians themselves, who were passive recipients of knowledge at the top level, and arguably not recipients at all in most classes. Geographical knowledge was always personal: the 14th century map of the route used for the transport of a statue through gold mines in the Wadi Hammamat (Harrell and Brown 1992), for all its apparent detail (wells, roads and temporary houses), is highly schematic and can only have been intended as an aide-memoire or diary for those who had actually been there. Furthermore, with reference to the Aegean and so the main 'long-distance' trade for the east Mediterranean, Gillis (1986) suggested that the bulk of trade was in the hands of middlemen traders (like Artzy 1997; see also Hirschfeld 1992; 2000), and so the Mycenaeans may not have had a fleet at all, certainly not one of any significance. This would further restrict knowledge of foreign parts, although it could have increased a general sense of otherness and prestige for the few involved and for the imports they offered. The difference between the east and southeast of Cyprus, but one day's sail away from the Levantine centres, and the 'distant' Aegean, while not obvious to the modern world, would have been significant in prehistory.

Another important element is how local markets receiving goods might work. Hodder and Ukwu (1969), building upon Polanyi's view of long-distance trade, argued that the local markets that develop around distant parent markets are disembedded from the local economy, and have nothing to do with the communities near them. It is thus possible that the only people who would have had a more than an extremely local concept of supra-local geography would have been mariners and long-distance overland traders, i.e., a relatively small number of people. Knapp (1997:27) argued that 'the waterfront ... often reveals a unique human openness to outside impulses', but it could equally have been seen as dangerous, a pollutant to be contained (see also Sherratt and Sherratt 1998:337-338; Barr 1970). Wenamun, washed up on Alashiya's shore, was greeted with hostility by the general populace (Goedicke 1975), and the status of merchants in Classical Greece appears not to have been high (Classical authors cited in Hasebroek 1933:8), regardless of their wealth; a situation found in other established societies as noted earlier (Trigger 2003:349-350, 629). Foreign traders at Ugarit were hedged about by restrictions. For example, RS.17.130 regulates the

activities of maritime traders, specifically the merchants of Ura (Cilicia). Formally under the protection of the Hittites, the merchants were nonetheless forbidden to purchase land, or settle permanently at Ugarit; indeed, trade was confined to the summer months (literally 'the harvest'), and the merchants were ordered to return home for the winter. The text also records a successful legal claim by a foreign merchant against a citizen of Ugarit. An Ugaritian would have been entitled to the house of his opponent, but the merchant, being foreign, was obliged to turn the property over to the king, although he was allowed to remove his Ugaritian debtors and their families as slaves instead (Helzer 1978:127-128).

The likely low level of interregional knowledge in the ancient world has an impact upon the way in which foreigners, and foreign goods are viewed. Knapp (1998), based upon a summation of Helms (1988), argued that distance automatically lent prestige, and while it is simplistic to view commodity trade, be it prestige or no, as merely the intersection of economic networks, it is equally misleading to view it automatically as the meeting of symbolic systems. The messages conveyed by objects are culturally specific (Hodder 1987), and thus meaning and use will be subject to renegotiation once cultural barriers are crossed (Thomas 1992; Hulin 1989). It may be that goods arriving in port were assigned the category of 'other' relative to local wares, but it is as well to remember that 'other' is, in itself, a *local* category, and that items that are not relevant or relate-able to indigenous systems will simply not be visible and thus will not be successful. For example, Welsch and Terrell (1998) documented a clearly differentiated distribution of glass beads and shell rings along the Sepik coast of New Guinea: glass beads were highly prized amongst the western groups of villages studied, where they formed a necessary part of the bride-price, but shell-rings were not common; in villages to the east, wives were acquired through sister exchange and glass beads had no appeal, whereas shell rings were used as marks of wealth and prestige; other items were traded between the two zones (resource/social groups) but these items were not.

Thus imports always tread the line between exotic and familiar, different and same, and this tension can be resolved in a number of ways. High level gift exchange can be seen as dealing with the familiar: prestige items of precious metals tended to be one-off 'designer' items or belong to a very small stylistic range: design variability and/or unfamiliarity mattered less than the materials from which they were made, which carried a universal (that is to say expensive) message. The existence of the 'international style' that emerged in the Late Bronze Age (Feldman 2002; Keswani 1989; Knapp 1998; Peltenburg 1991; E. Sherratt 1994), i.e., a range of motifs of Aegean and Oriental origin applied to a variety of media (see, for example, Crowley 1989), negates the concept of 'other', at least at this level of exchange. Even granted that those individual motifs that 'made sense', or were convertible to the indigenous repertoire were adopted (Crowley 1989:ch. 9), the whole adds up to a shared vocabulary. An equivalence of value was established, recognizable not only to those in the group, but to those who were not, i.e. local non-elites.

Sometimes the categories of same/different could indeed be manipulated by producers. For example kraters decorated with chariots, a style uncommon on the Mycenaean mainland, were aimed directly at the Syrian elites for whom horse and chariot teams had social and symbolic importance (Steel 1999; 2002a; 2002b). But the appeal was not automatic: those self-same warrior elites living further south, in areas under Egyptian control, favoured Egyptian-style bronze drinking sets over Mycenaean ones. Hodder (1982) noted that ethnic boundaries may be maintained by a limited range of material culture, whilst other forms and styles may be shared across group boundaries. In this context, E. Sherratt was right to suggest that the ceramics trade was successful partly because it lay outside the elite value system (1999:177). Other imports succeed by upgrading and enhancing existing practices, rather than products. Less fancy ceramics may well have succeeded precisely because they were assigned a low status in the host value system. Sherratt and Sherratt (2000) noted that the range of pottery and metal goods imported by sub-elites supported social display through the consumption of wine, oil and incense. Huge quantities of resinated wine were imported from Canaan into Egypt in the New Kingdom; its use as an alternative to beer in festivals may be viewed as an attempt by emergent elites to be different, but in socially safe contexts (Hulin 2004).

THE EVIDENCE FOR TRADE AND ITS LIMITATIONS

However, despite promise and theory, the most serious impediment to study and analysis is that,

on examination, we know much less than it might appear when we consider east Mediterranean Bronze Age trade. But, at the same time, in a circular process:

> Bronze Age trade studies have been narrowly framed in terms only of those items that have been recovered archaeologically and that can be shown beyond reasonable doubt to have an origin extraneous to the society under examination. … the serendipitous remnants that make up the archaeological record represent but a fraction of the diversity of goods originally produced, marketed, and exchanged. (Knapp and Cherry 1994:155)

If we consider the 'problems', we may note four main issues. First, as Knapp and Cherry (1994) highlighted a decade ago, we are (still) only beginning to address the need for a wide range of information in order properly to consider trade and provenance questions:

> …only sustained effort, usually involving expensive and time-consuming scientific methods, can generate reliable information about any aspect of those systems other than the purely quantitative and technological. … 'Origin', furthermore, is often assigned on the basis of stylistic or decorative criteria alone, rather than in combination with the results of scientific characterization studies, or after proper consideration of other contextual, documentary, or ethnohistoric evidence …

A nice example of such potential depth of information with multi-disciplinary study even within just the southern Aegean comes from the detailed investigation of provenance of LMIB/LHIIA ceramics in the Aegean (Mountjoy and Ponting 2000; previously e.g. Mountjoy *et al.* 1978). This material cannot be separated on the basis of stylistic and decorative criteria, but only through examination of the fabric; recent provenance work reveals how mistaken many existing 'standard' views have been, and significantly questions the very existence of a Minoan 'thalassocracy' beyond the LMIA period.

Second, there is the large hidden corpus of evidence that simply does not exist from the work at most archaeological excavations: perishable goods and the like. Textual data, the odd depiction (and now some scientific analyses, and the odd extraordinary find like a shipwreck) give us reason to think we are seeing only the tip of the iceberg (e.g. Knapp 1991; Wachsmann 1987; Pulak 1997). Third, we tend to focus on elite exchanges on the grounds that they are critical to political processes (and they also have a near monopoly over the 'good stuff' that most archaeologists lust to find). But again reference to textual evidence indicates how little we actually observe archaeologically. In Table 1 we consider the list of named gifts given by Amenhotep IV to Burnaburiash upon his marriage to a Babylonian princess (EA14), and compare this list with artefacts recovered/known from a typical sample of the archaeological record of exports/prestige goods. It is more than a little salutary to realise that only about 20% of the objects are archaeologically attested, and whole categories of evidence are completely invisible except in other texts and a few depictions.

Fourth, and perhaps most alarming, is the temporal and spatial dimension (cf. to some extent also Lambrou-Phillipson 1990:133-137 and then subsequent discussions pp.139f.). Eric Cline in a book central to scholarship in the LBA trade field in the 1990s, *Sailing the wine-dark sea: international trade and the Late Bronze Age Aegean* (1994), assembled 1118 imports of varying certainty and contextual association, and proceeded to try to derive trade patterns from this corpus (see also e.g. Cline 1999). One thousand one hundred and eighteen things sounds like quite a lot of evidence (and the catalogue of them runs to 125 pages rich in scholarly detail: Cline 1994:125-257, and the author clearly spent years and much effort producing this corpus: Cline 1994:xv), but this evidence comes from a period of c.600 years (Cline 1994:7) – so this is in fact just c.1.9 objects per year *on average* from a large and variegated region! More seriously, examination reveals that fully 277 items, almost 25% of the total, come from just two 'instantaneous' shipwrecks (Cape Gelidonya and Uluburun: Cline 1994:100-105). Thus relatively rich information on two instants in the past, but only about 1.4 objects per year for the rest of the six centuries at stake – and even this is misleading as just 149 objects cover the first three centuries of the LBA study period (Cline 1994:13 Tables 2, 3), so a mere c.0.5 objects per year for these centuries from the entire Aegean as known when the book was finished. When one considers the massive haul of material culture evidence from surveys and excavations at any site in the east Mediterranean, not to mention the entire world of perishable and other evidence not represented in

recovered artefact finds, this evidence base of 1118 items – biased strongly to a few locations and within them to mortuary contexts – becomes an utterly woefully inadequate, even totally misleading, basis to try to analyse trade – unless we define our study solely in terms of what little we know (see the first criticism above).

However, even if we acknowledge that this is the sort of data we must work with, then several stark problems confront us. Does a lot of Mycenaean pottery in the east Mediterranean mean extensive Mycenaean trade, or rather material travelling – and not necessarily as key items – with Levantine or Cypriot merchants returning from the east Aegean, or west Anatolia, or the Greek mainland? (See e.g. Catling 1964 for an early example of critical scepticism; and more recently Knapp and Cherry 1994:128-130; Bass 1998 – and for relevant scepticism about the movement of Greek pots in the first millennium BC, see also Gill 1994.) And, if they were important, then to whom – and how did this vary in time and space? The very small volume of Minoan pottery found in Egypt, for example, hardly indicates significant commercial relations, and its find-spots tend (where a context is known) to derive from what Merrillees termed 'middle class' or at least non-elite contexts. It is easy to downplay or dismiss the importance of such data (Merrillees 1972; 1998; Kemp and Merrillees 1980). Even the more plentiful corpus of Mycenaean pottery largely comprises one cache from Tell el-Amarna, and, as Merrillees (1998:153) writes, 'represents only a minute fraction of the millions of ceramic remains turned up in contemporaneous sites along the Nile Valley and indicate how minor the imports were in comparison'. Even the impressive 616 Mycenaean ceramic imports from Ugarit (combining Ras Shamra and Minet el-Beida), found 'in all excavated areas … indicat[ing] that this class of material was in use in the whole city of Ugarit and not confined to people living in specific areas' (Wijngaarden 2002:43) take a different complexion when considered in terms of time and space (data from Wijngaarden 2002:37-73, 330-342). In rough terms, these finds come from about 5.7ha of excavations – the total site area is unclear: c.26ha for Ras Shamra and something 'much larger' than 1.4ha for Minet el-Beida (Wijngaarden 2002:37 and n.5). Ignoring the obvious concentration in existing work on the main elite areas, this still works out at just c.1 Mycenaean import per 92.5m^2 of surface area. The material covers the temporal range of Late Helladic (LH) II/IIIA1-LHIIIB, or somewhere around 250+ years (using the chronology set out by Wijngaarden 2002:10 Fig.2.1) – thus around 2.5 items per year to the site on average – hardly overwhelming. Of the 294 vases with a known find circumstance (237 are unknown), 70% were found in tombs.

Wijngaarden (2002:24) states that the 'sheer quantity of Mycenaean vessels distributed outside the Aegean appears to be incompatible' with ideas that long-distance trade was not important to the Mycenaean economy. This may well be, but it would seem from Hirschfeld's study of pot marks on Mycenaean wares in Cyprus and the east Mediterranean that it was not the Mycenaeans who acted as the prime distributors of Helladic wares to the east Mediterranean, but the Cypriots (Hirschfeld 1992, 2000), and, in support of such ideas (see also Gillis 1986; Artzy 1997 cited above), one may note both a well-recognised rule of thumb that there tends to be about three Cypriot pots to every one Mycenaean pot at Levantine sites (e.g. Bourke and Sparks 1995:156), and the relatively meagre quantities of Cypriot material in the Aegean. It is, therefore, easy to make too much of the evidence of the easily recognisable Mycenaean ceramic exports of LHIIIA-B, without weighting such finds against the much greater evidence for other east Mediterranean trade. In any event, Wijngaarden (2002:7) instead adopts the viewpoint that the Mycenaeans (and other LBA groups within the east-central Mediterranean) took part in large, diverse, multi-faceted trade networks in which there were many participants and several modes of exchange. Wijngaarden makes the case in an elegantly produced volume that identifies 348 sites outside the Aegean with Mycenaean pottery. However, on examination, 72.1% of these sites have yielded 1-10 imports (across LHI-IIIB or c.400 years), and 89% yielded less than 50 imports (across LHI-IIIB or c.400 years). Any space/time analysis would again find that the significance of these imports is perhaps less than obvious. The simple ability of ceramics to survive and thus to produce an end-of-period 'pile' of data is misleading scholarship – the dynamic trade over time could well be much less significant than it seems. Akrotiri on Thera provides another 'example'; among the masses and masses of pottery recovered in the excavations of this major Aegean port site the Cypriot imports continue to comprise one now lost WSI bowl found in 1870 (Merrillees 2001), and the general east Mediterranean imports are only slightly more numerous – while important and exciting, the *three* Canaanite amphorae found at Akrotiri in archaeological work from 1967 to 1998 (Doumas 1998) are most notable for their very scarcity. Significant long-distance commodity trade is either represented elsewhere at the site, or is relatively unimportant. Instead

ideational value in long distant contacts seems much more important, as evident in the Nilotic landscape in one Akrotiri wall-painting, in the use of the lion motif in another and monkeys in another, and in representations of jewellery with exotic associations, among a set of such association across the Aegean at this time (e.g. Manning 1999:136-144 with refs.).

However, in contrast to this sort of spatial-temporal minimalism, some textual evidence, and some rare iconographic evidence likely referring to Aegeans, and depicting Aegean-style items depicted in the context of royal-level offerings or gifts with other peoples in the Theban wall-paintings (Knapp 1985a; Sakellarakis and Sakellarakis 1984; Rehak 1998; Matthäus 1995; Wachsmann 1987) seem to hint at very different connections by the mid-15th century BC – although Wachsmann (1987:42) did not regard even the Keftiu representations in paintings from the Theban tombs as indicating an Aegean presence in Egypt. Nonetheless, this sort of evidence seems to indicate communication within a materialised imperial/elite koiné – the gift-exchange system well-known in the region (e.g. Liverani 1990:260-266; Zaccagnini 1987:58-61). But even then the evidence must be put in context: as Bass (1998:186-187) notes, depictions of Aegeans in Egypt are limited to just six tombs, and this compares poorly therefore to the totality of evidence – moreover, in contrast to the depictions of Syrian ships in Egyptian art, no Aegean ships are yet known (Merrillees 1968:194 previously made this point suggesting that Keftiu were represented as bearers of goods/gifts, and as not masters of the sea). Despite odd mentions, the truth is that the Aegean is a rare and peripheral player; even in the Amarna age of international connections and diplomacy it must be noted that there is no correspondence with any ruler in the Aegean (western Anatolia is as close as it gets).

It is all too easy to make far too much of the very limited Aegean-Orient connections in the second millennium BC, and much previous scholarship has undoubtedly done just this on meagre evidence (e.g. Kantor 1947). Even in the LB3 era, when undeniably an international style/koiné is evident across a wide region of the east Mediterranean, the role of the Aegean remains less than clear. Even the tantalising obscurity of the Hittite-Ahhiyawa textual evidence speaks to this point (see below). Textual evidence from the Near East details many connections but not with the Aegean, and none of the written source examples of diplomatic gift exchange and other long-distance inter-elite contacts, or indications of the potential movement between regional/polity elites of the skilled artisans who could have produced the valued prestige artworks (Zaccagnini 1983) actually include the Aegean (e.g. Zaccagnini 1987; Peltenburg 1991:168-169; Moran 1992). There are but odd hints of a peripheral player or of an exotic source for certain named items; in reverse, the Linear B tablets from the LB3 Aegean also indicate some mentions of foreign sourced items or people, but give very little indication of interregional trade or high-level contacts (see below). Thus how far such a model of an international style/koiné and of inter-connectedness translates beyond the Near Eastern core into the wider east Mediterranean, and for which time periods, is unclear.

For example, the discoveries of generically similar wall paintings of late MBA to Tuthmosid date across the Aegean and around the east Mediterranean at coastal/port sites led immediately to suggestions that this was a form of koiné, with similar expressions by elites of recognised symbols and values (Niemeier and Niemeier 1998; Knapp 1998; E. Sherratt 1994) – and see discussion above. This suggests connectedness, despite the largely non-existent other evidence for Aegean contacts with the Levant and Egypt from the late MBA until LMIA, and only a little evidence for LHIIA/LMIB contact. But, when one examines the Aegean evidence, one perhaps finds that the well-known Nilotic wall painting in the West house at Akrotiri on Thera (see above) derives its *local* justification and value from the very lack of general Aegean familiarity with Egypt and the Levant; it is instead part of an exclusionary political economy possible on periphery of the east Mediterranean world (Manning *et al.* 1994:221-222, 228). The situation clearly does change in LB3, when we can see a common pool of regal/power symbols (e.g. leonine creatures, sphinxes, griffins, chariots) employed in local contexts (see above) across the wider east Mediterranean region, and objects are malleable and transferable (within recognised social and cultural biographies of classes of objects), as local elites sought to develop status through reference to a repertoire of symbols that linked to the extensive and shared power/status-laden east Mediterranean and Near East. Similarly, it is only in such a connected elite world that the specific biographic value of objects can also come significantly into play – before this they are at best an exotic (and perhaps very socially valuable) class. A nice example of the LB3 world in action are the exotic source Near Eastern lapis lazuli cylinder seals reworked with gold foil on Cyprus and

then transported to a Mycenaean ruler at Thebes (Porada 1982:68-70). Perhaps in the LB3 period (only) we may see the Aegean as firmly engaged within the periphery of the east Mediterranean world system.

This LB3 period, or broadly the 14th-13th centuries BC, witnessed a variety of relatively stable state-level or complex civilisations in the Aegean, Anatolia, Cyprus, Levant, Near East and Egypt. The Amarna correspondence indicates a wide world connected at the kingly level to all but the Aegean; Hittite correspondence shows royal links with the Aegean (assuming Ahhiyawa is somewhere in Greece), but is alone in this regard – and the extent of connections here is notoriously problematic across the two odd centuries of apparent contact (Güterbock 1983; 1984; Lambrou-Phillipson 1990:127-131). Nonetheless, even the written material can be misleading in creating an impression of smooth and continuous contact and exchange. Messengers could be held for years (e.g. EA 3, 29). Nor, as we will discuss below, does it seem on analysis that many states did much of the actual maritime trade component themselves – but instead through or via others (Artzy 1997). Three shipwrecks are known from this period, broadly: Cape Gelidonya, Uluburun and Point Iria. A key question is whether these are the tip of the iceberg of a huge such body of evidence (well beyond the textual evidence of inter-kingly exchanges), and are typical and indicative of lots and lots of such voyages (and many other such wrecks out there to find), or whether they may be relatively special – detritus from a restricted number of elite exchange processes. The fact these known Bronze Age shipwrecks are all of the LB3 period (from roughly two centuries), given random find circumstances, also raises the question of whether the absence of any MB or LB1 evidence (from some five centuries) indicates much less regular and less commoditised trade in those earlier periods (We leave aside the question of the EBA Dokos 'wreck'; Bass 1998:187 also refers to a putative LB1 wreck off southern Turkey about which nothing firm is yet known). Known (non-shipwreck) imports concentrate into the same LB3 period, supporting the reality of the pattern – Kommos on Crete offers an example (Watrous 1992). Finds of stone anchors also provide some indication. Here it is notable that whereas significant numbers of these have been recognised off, or at, LBA sites in Cyprus, the Levant and Egypt (Wachsmann 1998:258-274) – at least consistent with a moderate level of shipping – such finds are much scarcer to date in the Aegean literature (whether reflecting reality or lack of investigation is not entirely clear): 'very few stone anchors are known from the Aegean' (Wachsmann 1998:275). The distribution of bulk transport vessels such as Canaanite Jars or Cypriot pithoi or plain white jars offers another measure, as these items indicate trade well beyond the knick-knack level. Again, although finds are known in the Aegean from LMIA onwards (e.g. Leonard 1996; Doumas 1998), it is fair to say they pale into insignificance compared to the copious import/export numbers found respectively in Cyprus or the Levant or Egypt. One might speculate, as above, that the connected world of the Near East included Cyprus, but only partly the Aegean, certainly until LB3.

ELITES AND OTHERS: CONSUMPTION AND IDENTITY

Needless to say, in many areas, the record of imports and influences is strongly associated with the local elite, whose tombs and living contexts dominate in much existing excavation. Such imports – prestige goods (material, esoteric or otherwise) – have been proposed to comprise important power resources in several cases (e.g. Sherratt and Sherratt 1991; Knapp 1998; Steel 1998). The link between elites and long-distance contact and trade in material or intangible goods and ideas is ubiquitous in the archaeological and ethnographic record (e.g. Helms 1988; 1993; Schortman and Urban 1992; Sherratt and Sherratt 1991). But the linkage from there to the rest of society is less clear. For example, Wijngaarden (2002:199-200) argues that because most published/described tombs found in an area of Cyprus (Maroni *Tsaroukkas*) contained some evidence of Mycenaean imports, therefore such items are unlikely to indicate elite status (contra Manning 1998; Steel 1998). Hence Wijngaarden implies imported Mycenaean ceramics penetrated widely into Cypriot society (or at least the few major coastal sites – Aegean imports to Cyprus are strongly biased to certain loci: e.g. Portugali and Knapp 1985). But this logic only applies if one can argue that all or at least much of the population at these notable sites were buried in the tombs in question. In reality, for the case he refers to, we know that there were an unknown number of other tombs without such imports (Manning 1998:43). At issue are just over 40 tombs (Johnson 1980; Manning and Monks 1998) covering some 400-500 years (MC/LCI transition through LCIIC). The number of burials per tomb is unknown for the Maroni tombs, but is unlikely to have been large based on comparanda (Manning 1998:43-44). A total number of

burials in these tombs of 100-400, give or take, seems plausible. This will have been a very much smaller number than the likely overall population for this major site area across the 400-500 years in question. Hence the known and conspicuous tombs represent but a tiny fraction of the real mortuary record – the presence in this small sub-set of imported Mycenaean ceramics informs us of the importance or use of these by this small group (reasonably assumed to be an elite element of the wider society), but more or less nothing about the role of such imports in the wider, non-elite, society.

Given much research on the nexus of elites and long distance imports, the relation and relevance of such elite items to a wider social world is now perhaps the key issue. Important also is exactly who among these groups is involved in terms of social position, age, gender, and so on? We may also wonder at the levels of connectedness within the LBA world. Elites – yes; some apparently specialist gateway communities, which were at trade route nodes – yes (e.g. Marsa Matruh: White *et al.* 2003; Tell Abu Hawam); or ditto but also important centres – yes (e.g. Kommos on Crete: Cline 1999:120; Ugarit); but what about the rest of the LBA societies? And what was an import, and how was its status created?

This is more complicated than it seems to modern archaeologists, who 'recognise' imports very readily as a category. It is important to realise that this was not necessarily straightforward in the relevant prehistoric contexts, and certainly for the majority of potential consumers in such societies. Imported goods faced the problem of product recognition, hence, for example, we may argue the move in Late Cypriot II to a standardised package – the BR juglet – for low-bulk liquid goods, compared to the range of juglets exported to the Levant in MCIII-LC I (Maguire 1990). And we see only the successes: the imitation of BR juglets in local fabrics in the Levant, or faience imitations of Mycenaean stirrup jars in Egypt, for example, are taken to indicate that the original product was held in high esteem, and this in turn may indicate 'branding' of similar local products (or Sherratt and Sherratt 1993:365 argue, for example, that the presence of Cypro-Phoenician flasks on Rhodes and Kos indicates that they were used for re-bottling liquids shipped in bulk).

The 'otherness' that made an import not 'local' is also complex. Distance alone cannot be the sole indicator of the 'other', otherness depends to a large extent on the permeability of social boundaries: i.e., the willingness of a culture to embrace innovation at all. On a theoretical level, this subject is rarely addressed head-on, but is implicit in two areas of study: ethnicity/boundary maintenance, and the transfer of technology. The social anthropologist F. Barth (1969) became the point of departure for archaeologists anxious to avoid the equation of archaeological cultures (defined by stylistic clusters) with ethnic groups prevalent until the mid-nineteenth century, when Childe's *Social Evolution* was published (1951). Barth argued that ethnicity is the aspect of social economy that is most often related to economic and political pressure, particularly inter-group competition; thus ethnicity is most active and visible in the maintenance of social boundaries. However, the question of visibility in the material culture record devolves upon the interpretation of style – be it style as object, as technology, or as decoration.

Wobst (1977) took a functionalist position and argued that style conveyed culturally significant meaning; Miller (1987), Shanks and Tilley (1992), and Wiessner (1983; 1984) emphasised that style is actively pursued by individuals in their social and cultural contexts, and this has been taken up by advocates of agency theory (below). Technology, believed to be separable from style by virtue of its practical scientific constraints, is now also seen as a 'style', in that the choice of *a* technology out of all technologies is culturally bounded (e.g., Pfaffenberger 1992; Sherratt and Sherratt 2000, Hegmon 2000). But, unfortunately, as Hegmon pointed out, the interest in the maintenance of boundaries means that more attention has been paid to differences across boundaries than to differences within (although Wiessner's 'assertive style' may be understood as individual expression).

Another important problem concerns whether trade was elite-oriented with simply a limited trickle down effect, as some analyses of reported evidence would indicate (e.g. Portugali and Knapp 1985), or whether there was interregional trade at different levels that permeated more widely than a few main centres/emporia and the regional elites? Most work to date has formalised the elite-centred view – but with an inevitable circularity of logic as elite oriented contexts and data have dominated much archaeological research until recent decades (and the advent in

particular of intensive regional survey projects). Archaeological studies still derive directly or indirectly from Veblen's (1899) view, expressed nearly one hundred years ago, that consumption is an aspect of the political economy of societies. Economists (e.g. Sombart 1967, Frank 1993), anthropologists (e.g. Appadurai 1986, Kopytoff 1986) and sociologists (e.g. Baudrillard 1968), have concentrated upon the conditions under which economic objects circulate in different regimes of value in space and time. Archaeologists following this line (e.g. Sherratt and Sherratt 1991) have focussed upon supply-side determinants of consumption without addressing what makes products acceptable to consumers. Such approaches inherently tend to dichotomise elite and popular culture, with the assumption that the wealthier elements of society control power and knowledge for their own ends, and are arbiters of tastes (see also Foucault 1972; Berger and Luckmann 1966), which then trickle down to the rest of society.

However, there are other ways of approaching the analysis and construction of society and trade – especially by focussing on individuals and their choices. Economic psychologists (e.g. Ajzen and Fishbein 1980, Lea *et al.* 1987, Lunt and Livingstone 1992) have sought to move the focus of the study of goods away from their role as expressions of status (still the concern of much archaeology) to the ways in which they express self and personal relations. Csikszentmihalyi and Rochberg-Halton (1981) argue that the symbolic meaning of objects balances between differentiation (social individuality) and similarity (social integration), in much the same way as Douglas (anthropologist) and Isherwood (economist) (1979) argue that goods are explicable only in their total context as represented by the full range of possible behaviours. Ajzen and Fishbein's (1980) interest in the relationship between normative beliefs and consumption behaviour finds an echo in the assertion of Douglas and Isherwood (1979) – itself based upon a long tradition of anthropological thought concerning the polarities of individualist and conformist behaviours (e.g. Durkheim 1893, Weber 1976) – that the degree of latitude afforded to individuals by the groups to which they belong determines the freedom with which they embrace innovation across the whole spectrum of their activities. They argued that the level of expectation placed upon an individual, both as an individual and as a member of a group, determines his/her willingness to embrace innovation. We differ from this perspective only in that whereas they saw such social forces as constraining, we apply an agency perspective and argue that social forces simply stake out an individual's room to manoeuvre by determining what is appropriate.

Part of the problem and reason for the dichotomy of elite/other in existing studies stems from the fact that much existing literature on LBA trade derives from, or is influenced by, ethnographic parallels that are not necessarily compatible with the international city-state arena of the LBA eastern Mediterranean and its peripheral elements. For example, studies of the Melanesian *kula* system have heavily influenced a number of views of eastern Mediterranean exchange (e.g. Portugali and Knapp 1985; Knapp 1988-89). In contrast, it might be more useful to examine analogies with trade between colonial powers and those colonies that have achieved a social development comparable to that of the imperial power: for example studies of 17th and 18th century probate inventories in America and the UK (e.g. Riden 1980) may provide attractive parallels for archaeologists for the very same reasons that they are viewed with caution by historians: they record material wealth at a domestic level, rather than a man's total assets, and as such are in effect written representations of archaeological phenomena and are subject to the same caveats. The peripheral world of imperial China, for example the complex chiefdoms of the Philippines (Junker 1999), offers another challenging and relevant case study that breaks the current mould.

WHO?

It is striking that in contrast to the many studies on imported/exported ceramic vessels and sherds, relatively little has been written on the issues of the relations between theories of trade and the necessary mobility: and not just of objects, but also of purveyors and even producers, and also the modes of transport (Knapp and Cherry 1994:152-155). And even less wordage exists on why and how the peoples of the societies of the east Mediterranean sought and consumed such traded goods. Indeed, a prominent problem is that despite archaeological, textual, and art-historical evidence of various sorts, little concrete is in fact known about the traders and their ethnic/political labels – beyond the material culture detritus they have left behind – for the east Mediterranean world. This is in sharp contrast to the more literate world of the contemporary ancient Near East, where text sources provide considerable data on traders, raiders, trade,

messengers, prices, and so on.

In the ancient Near East textual records provide information on individual traders (e.g. Zaccagnini 1977; Knapp 1983), crafting, goods, taxes, prices, inter-ruler correspondence and gift exchange, and so on, within a proto-historical framework (e.g. Zaccagnini 1973; 1976; Veenhof 1972; Leemans 1950; Larson 1987; Knapp 1991) – it is thus possible to try to write over-arching political-economic history (e.g. Warburton 2001), and to compare in some detail trade in the ancient Near East with other early civilisations (Trigger 2003:342-355). At the level of royal correspondence, a single letter can list dozens of items sent from one country to another (e.g. Table 1). It is even feasible (if not always useful or relevant) to engage in debates over economic modes from largely text evidence, such as whether or not there were private-independent versus state-sponsored/controlled merchants in a particular region (e.g. Egypt: Bleiberg 1995; cf. Warburton 1998). The same cannot be said for the east Mediterranean – despite a handful of tantalising references to merchants likely from Crete (if Kaptara = Crete) in Near Eastern texts as early as the MBA (for discussion with refs, see: Wiener 1987:262; Lambrou-Phillipson 1990:122; Knapp and Cherry 1994:145). Instead, we have had decades of debate over whether a couple of known ships (found as shipwrecks at first Cape Gelidonya, Bass 1967, and then Uluburun, e.g. Pulak 1997) were sailing to, or from, the Aegean, and whether they were crewed by Mycenaeans or Syrians or others (Bass 1967; Muhly 1970; Bass 1991:69-75 and refs.). And, although there is copious information in the LB3 Linear B tablets of Greece and Crete (evidence relevant to the international, palatial, systems of the 14th and 13th centuries BC – and not necessarily to be transposed to earlier periods) – including mention of ships, personal names associated with maritime activities, and foreigners or captives from overseas locations (e.g. summary in Wachsmann 1998:123-128; see further in Palaima 1991), and mention of goods/items that must have originally been imports, or items ('of export quality') that plausibly were to be exports (see Knapp 1991:41-44) – information relevant to merchants or overseas trade is largely if not almost totally absent in these documents (various explanations are offered – but the net result is that we have no information). It is instead assumed on the basis of circumstantial evidence. This leads to the rather unhappy situation where we have books and articles that abound with statements along the lines that the 'Minoans' did such and such, or the 'Mycenaeans' traded some item, and so on. But we totally lack knowledge of the people, yet alone the institutional and commercial structures, involved – much though one may wonder about the individuals with personal names along the lines of 'fine-harbourer', 'shipman', etc., reported in Linear B tablets (Palaima 1991:284). Indeed, the presence of imported/exported material culture – archetypally pottery – usually does not inform us of the identity of the traders. If one wished to be awkward, one could argue that much Minoan, and certainly much, if not all Mycenaean, pottery from outside the Aegean was transported by Syrian or Cypriot merchants.

The 'Mycenaeans' are a particularly difficult case. It is debatable whether they are even referred to in Egyptian or ancient Near Eastern texts (for discussion of Aegeans in art, see above). They might be the Tanaja mentioned in a few fairly uninformative Egyptian texts (see Cline 1994:32, 114-116), but that is about it. It is now widely agreed that somewhere in the Greek world is probably the Ahhiyawa referred to in a couple of dozen Hittite documents (for list of documents, see e.g. Cline 1994:121-125; for case, see in recent scholarship with further refs. e.g.: Niemeier 1998a; Bryce 1989a; 1989b; Güterbock 1983; 1984), and, conventionally, this has often been assumed to be an entity centred around Mycenae, or perhaps another mainland centre like Thebes (Niemeier 1999:144; and for example considering new views on KUBXXVI 91: based on a 2003 press release discussing work of F. Starke, J. D. Hawkins, W.-D. Niemeier and J. Latacz [received courtesy of Peter Ian Kuniholm], and their proposal to read the text as having the King of Ahhiyawa refer a 'Kadmos' as his ancestor –literally 'the grandfather of my father'). But this textual presence extends no further than the Aegean region, and none of these texts yield information on trade (or much else) – it is the archaeological picture of ceramic finds and their patterning that tends, more if anything, to inform an interpretation of these texts (e.g. Niemeier 1998a; Mee 1998).

Chronology is also relevant. The first attestations of the term Ahhiya/Ahhiyawa as currently known seem to occur in the reign of Tudhaliya I/II, and others date to his successor Arnuwanda I. The latter is dated in the range 1450-1420BC (Astour 1989), and by others either from the last decade or so of the 15th century BC or from the start of the 14th century BC (see Müller Karpe 2003:384 with refs.). Clearly there remains an element of imprecision as yet in earlier Hittite New

Kingdom chronology (cf. Wilhelm and Boese 1987), however, the notable thing is that this date range equates with the LMII through LMIIIA1 period in the Aegean. This was the 'mono-palatial' period when Knossos was the sole palatial centre on Crete, and appears to have taken control of at least central and likely also western Crete (Manning 1999:219 and n.1058). It was also likely the sole 'superpower' in the Aegean: the LH centres were at best 'emergent' at this period. Everything of course changed with the LMIIIA2 early destruction at Knossos (although Knossos likely re-emerged as a significant Aegean centre, and likely leading centre on Crete: Niemeier 1998b:38-39), but, until then, Knossos was the principal Aegean centre based on current knowledge. Knossos=Crete at this time had international presence. The LMII-IIIA style decorated garments of the princes of the Keftiu in the second Rekhmire tomb painting phase belong to this period; as does the impressive Isopata 'Royal Tomb', as does the stone vessel with the Tuthmosis III cartouche from Katsamba, and so on. Similarly, the Knossos armour workshops were the leading Aegean centre through to the end of LMIIIA (Driessen and Macdonald 1984; Niemeier 1983; Hiller 1984:30). One therefore at least wonders about the location of Ahhiyawa at this time? Could the capital have been Knossos? (The corollary is that the location of Ahhiyawa's political centre changed in LHIIIA2 onwards after the destruction at Knossos, to Mycenae, or perhaps Thebes, or even another centre. As Cline 1996:146 n.46 notes with references, the idea that 'Ahhiyawa, as understood by the Hittites, referred to different parts of the Mycenaean world at different times, changing location over the course of several centuries' is a possibility.). Such temporal and spatial fluxes add to, and complicate, any generalising analyses.

Moreover, beyond easy nationality and geographic labels, lie independent merchants (Knapp and Cherry 1994:142-145) and especially those christened 'nomads of the sea' by Artzy (1997), an important collection of people (by the LB3 era especially) outside the state elite structure who were hired or bought to provide, and take on the risk of, ships, shipping and maritime expertise. They became the agents and actors between centres and elites. Artzy makes a compelling case for the rise and significance of this loose grouping. She sees 'at times, artisans, such as metalsmiths or others who knew about the production of the purple dye' joining and voyaging with these people (Artzy 1997:7). Here we have extreme mobility and maritime geography beyond the state, reaching from the east to central Mediterranean in the LB3 era, and yet largely hidden (or requiring teasing out) in the textual records – except at the end of the LB3 period when, with the collapse/re-orientation of the LB3 trading world, these same nomads of the sea became pirates and the enemy 'sea peoples' known from several texts/inscriptions (Artzy 1997:12; Sanders 1985; Lehmann 1985). In archaeological terms a few trader sites may be noted, otherwise such polymorphic groupings are also largely invisible except as proposed for various palimpsests of material from mixed origins. Further, Arzty's work (p.9) highlights a dual-trade world conveyed and carried out by these same agents, with a main inter-elite cargo trade, complemented by captains' or sailors' trade on the side (Braudel's 1972:107 'tramping'). The modes and motivations of acquisition and consumption in any local context will have been very different between these two economies, even if involving the same boat.

ACQUISITION AS EXPRESSION

The standard argument is that individuals acquire goods through which to build and express status and prestige, with most work focussed on elite activities in this regard. It is this language of expression that is the prime focus of this discussion, and, as with all new languages, it would be as well to try to compile a list of 'key words' before trying to say anything. Unfortunately, this is still an area of contention, for two reasons: (i) the inevitable biases of the material record itself and (ii) the relative weight given to the range of items traded. Up until now, shipwreck sites such as Uluburun provide rich testament to the possible range of even a single consignment, much of which would ordinarily not otherwise be evident in the material record: the 10 tons of copper (more oxhide ingots than the rest of the region put together), one ton of tin, and the gold and silver scrap would have been reprocessed over the centuries, with but a small proportion surviving, as would the glass ingots and beads; the acorns, almonds, capers, coriander, fig seeds, grape seeds, black cumin, oak and beech leaves, pine cones, saffron flowers, sumac olives, terebinth resin, blackwood and cedar logs would also have perished; the fate of the various beads, swords and other luxury items would have been as random as for most in the Near East. Table 1 compares the contents of high-level gift exchanges in one Amarna letter with its archaeological counterparts. Clearly the chances of recovery are not great.

Metals and ceramics provide the key indicators for ancient trade in the existing evidence and scholarship. Metal is overemphasised partly because the minerals trade is inevitably prominent in high-level correspondence, since it was the literate elites who controlled the organisation of production and export of bulk items. However, as Horden and Purcell pointed out (2000:350), the usefulness of certain metals in the definition of an elite does not imply their scarcity, since metals were also utilitarian (below). Moreover, while few would doubt the importance of the copper/metals industry to Cyprus, the Aegean, and Sardinia, islands with a built-in advantage by virtue of access to these resources, the assumption that the metals trade was the driving force behind economic development (as argued by Renfrew, Knapp, Sherratt and Sherratt, etc.) is both simplistic and particularist.

Cyprus is a case in point. Knapp (1996b; 1986b), Keswani (1996; 1993) and Peltenburg (1996) regarded the mining and production of copper on a scale, by LCII, that far outweighed local needs, and so argued that external demand drove a shift in the island's economy from a regional, agricultural, and village based society to a complex, urban, and international one. But the evidence remains less than overwhelming – outside the text mentions of Alashiya and its copper, and the supply of a few significant cargoes by its king. An earlier LBA copper production site is now known in the Troodos foothills at Politiko *Phorades*, but this site and community was very small and was perhaps only seasonally exploited (Knapp 2003); similarly the much discussed 'Fortress' at Enkomi (e.g. Muhly 1989:298-305) is impressive only because of the lack of other evidence, and is in fact hardly overwhelming in scale. From LCI through LCIIC there is a lack of evidence for a significant organised structure to the Cypriot economy compatible with island-wide large-scale metal production (Manning and De Mita 1997 – cf. Webb 1999 who argues the case for more unified ideological structures). External agency might be suggested to be crucial. Much of the best evidence for a major Cypriot metals industry and its linkage to power and ideology on Cyprus is notably late, from the 12th century BC in particular (see Webb 1999:298-299 with refs.) (although Knapp 1986b:35-37 seeks to push the evidence of an ingot cult back into the 14th century BC). Thus it is arguably an outcome of complex engagement with the east Mediterranean, rather than necessarily its prime or only cause. In several cases agriculturally-based activities, rather than metallurgy, appear central to several prominent sites (or the excavated areas thereof): e.g. the elite area of Kalavasos *Ayios Dhimitrios* with its enormous pithos hall and other nearby pithos storage, and great settling tank, and so on (South 1995; 1997), or the 'palace' area of Alassa *Paliotaverna* with its pithos storeroom and evidence for impressed pithos sherds (Hadjisavvas 1996; 2003). Muhly (1986) also noted Cyprus/Alashiya's significance as a major source of wood and a centre for ship building, at least in the Greco-Roman period, although the references to Alashiyan timber (EA 35, 36 and 40) in the Amarna letters suggest that it was a source for wood earlier. Timber in archaeological terms is a largely invisible high bulk convertible industry, which may have had a similar impact on the Cypriot economy as metal. Or olive based industries, and so on.

In any event, such arguments centre on production, rather than consumption, and the role of metals in indigenous economies is still unexplored. Clearly precious metals, to be converted either into objects of desire or used as a means of payment, had a readily identifiable and translatable value across the region (although gold was twice as expensive in Syria as in Egypt, where wealth was measured in silver and was prized as an incentive for mercantile activity in itself: Castle 1992). However, once the metals were converted into indigenous value systems, they played a varied and context driven role: the status of bronze over ceramic pots for instance, must have been highly context specific, just as the lithic industry played an important part in agriculture well into the Iron Age (Rosen 1997). Copper was expensive precisely because it was shipped in bulk; its distribution within a system, in terms of the status of the items produced has been little studied; certainly it is not comparable to the precious metals, which were intrinsically valuable because of their practical disadvantages as much as their aesthetic appeal. Table 2 ranks a selection of sales from (mostly) Deir el-Medina in Egypt during the 19th dynasty, converted into *deben* where possible for ease of comparison; bronze items certainly were amongst the most expensive items listed, but there were also moderately cheap items: a razor cost about the same as a basket or a goat, and less than a tunic. Metal objects may have been items to aspire to, but would have been within the grasp of a larger section of the population than is sometimes supposed.

If the role of supposedly high value goods in local economies is sketchy, the role of ceramics is more firmly established in many minds as make-weights alongside 'real' cargo, necessary

containers for higher value goods, space-fillers or items for petty trade, but never as items in their own right. E. Sherratt (1999) disagreed, but noted that ceramics seemed never to make up more than 20% of a cargo on bulk carriers; arguably true as far as it goes, this observation is of value only if one assumes that ceramics always piggy-backed on the bulk trades. If this were indeed the case, then the huge quantities of Cypriot and Mycenaean ceramics in the Levant implies a hidden trade in bulk commodities (usually taken in the literature to mean metals, but also including timber, pithoi and Canaanite jars) of staggering proportions. Certainly it should be remembered that ceramics could comprise the bulk of cargo on smaller ships: the Point Iria, for example (Phelps, Lolos and Vichos 1999).

It is clear that even fine ware ceramics played little, if any, part in high-level gift exchange, but E. Sherratt pleaded for the economic importance of pottery to be appreciated, arguing that understanding the supply side of their economics – production patterns, specialisation, etc., is but one side of the equation, and that the cultural context of local consumption, and the cultural values attached to imports is the other. She noted the huge quantities of Cypriot and Mycenaean pottery that moved around the east Mediterranean, a third or more of which were not containers and thus prized not for their contents but, presumably, aesthetics and associations. She also pointed out the differences in takeup pattern between Hittite Anatolia, the Levant, and Egypt. However, these patterns surely represent the purest evidence for selection by consumers on the grounds of taste, although there is evidence of a targeted export industry producing certain Mycenaean shapes specifically for the eastern market (Steel 2002) – noting that such specialised production can nonetheless involve great differentials between the respective societies (e.g. Phillips 1998; Junker 1999). E. Sherratt, however, despite her plea for consumers of the pottery trade to be taken into account, explained the phenomenon of differential distribution in terms of production: absence was explained as the result of resistance by elites with an interest in maintaining centralised control of a bulk trade in 'more socially and economically significant goods and materials' to penetration by small-scale independent producers of ceramics.

CONSUMPTION AS ALTERNATIVE LOGIC

In former days largely functionalist ideas often underpinned concepts of trade/exchange (e.g. Renfrew 1972). In essence, a number of models of trade and exchange were based upon the search by resource poor areas for materials from resource rich areas; the assumption was that the bases of trade consisted of trading what you have for things that you do not (mutual complementarity). In turn, thinking along such lines, Merrillees, for example, doubted the significance of Cyprus in the Aegean markets principally because he regarded the resources of the two regions as being too similar to make exchange desirable (1974:7). In fact, in money-less economies, a wide variety of subsidiary goods may be exchanged to make up an abstract notion of value (expressed as measures of gold, silver, oil or copper debens, shekels, etc.). For example, at Deir el-Medina *mss*-garments and sandals were frequently included in exchanges to make up value, and it cannot be supposed that the recipients were without such items themselves (Janssen 1975:524). Thus while the presence of Cypriot copper on Sardinia (or even Crete) is seen as problematic, it would have been perfectly possible for a consignment to include a quantity of copper as make-weight within a broader transaction; as long as the recipient was a merchant and not a producer, his need for copper would be the same whether locally acquired or not. It cannot be supposed that the recipient of the goods described in EA14 (Table 1) did not possess bronze razors, mirrors, etc., of his own. Certainly on a smaller scale, ceramics would have moved up and down the line as part of a barter system, distorting deposition patterns. Need, value, and negotiation much be conceived in localized and social and symbolic terms, not solely in macro-economic and functionalist terms.

A non-materialist approach to trade is required, with a greater appreciation not only of consumer buying strategies, but the means by which those consumers – high-ranking elites if you regard the bulk of trade as the engine of economy, emergent 'bourgeois' elites if ceramics and invisible trade are regarded as powerful economic commodities in their own right, or both – express their identity through imported goods.

Douglas and Isherwood (1979) argued that consumption is always linked to status construction and display (Bourdieu 1984), a view that sits well with archaeological models derived from Polanyi. Tandy (1997), for example, tries to link modes of social expression of status to consumption in early Greece. However, the move away from equating cultures with styles has

meant that style has become focussed upon individual objects. Douglas and Isherwood also made the point that status consumption relates to the entire repertoire open to the individual. They introduced the archaeologically useful – and measurable – concept of consumption periodicities: i.e., how often an object is used and displayed relative to everyone and everything else. This brings us more to the work of economic psychologists (see above), who have sought to direct attention to the way choice of consumption expresses self and personal relations (which can include status, etc., also as in the traditional archaeological approach – but is wider and, critically, can encompass the non-elite as well). It is of course difficult to judge whether one Cypriot jar containing unguents for personal use at a public event would signal a higher status than a host of plain local cups used at the feast. On the other hand, comparing like with like, a Mycenaean drinking set would certainly send a different message from a local one. In this regard, it is interesting to note that the take-up of 'cheaper' imports (Base Ring juglets, for example, or Mycenaean drinking sets) appealed to the sub-elite classes in Egypt (Merrillees 1968), and possibly the southern Levant (Steel 2002). Such objects may initially have circulated in the elite sphere, but as their popularity spread to the sub elites, they would, by definition, have lost their elite status. We therefore gain different windows into the entirety of local cultures – and can start to shake off the solely elite centred focus of most existing work. Kopytoff (1986) argued for a biographical approach to specific commodities, in order to tease out the expectations placed upon any given item by the communities its passes through. Appadurai (1986) agreed, but broadened the focus to include the 'social history' of things, which includes whole classes of objects; arguably an approach more relevant to the bulk of the archaeological record. Both scholars emphasised the way objects may be restricted ('enclaved') in circulation in order to enhance either their value or their owner's prestige. Archaeology offers the further ability to address how such roles and values can also transmute over time.

What this means is that analyses of trade in the east Mediterranean have to examine the contexts of consumption and reception in local communities; to move from mere quantification and cataloguing of 'imports', and the mere label of 'import' and presumed significance *per se*. As always, the truth is more complex and often contradictory. A new generation of nuanced examinations of the social roles of imported/exported objects is called for.

CONCLUSIONS

We have deliberately sought to take a somewhat minimalist and 'problems'-oriented view, seeking to identify and to suggest issues in need of investigation, consideration, and clarification. We are particularly concerned with what we do not (yet) know – but, at the same time, it is true that 'the archaeological record is always minimalist' (Horden and Purcell 2000:269), and so we must seek to find a middle path. We suggest that a consumption-oriented approach may offer a useful conceptual and explanatory future for east Mediterranean trade/exchange studies. We have tried to highlight the inadequacies of the current data for anything other than such a social and relative approach. Much 'quantification' is at present meaningless in either historical-temporal or spatial, or human, terms. We have tried to highlight that the majority of society was localised and not directly involved in trade and geographies of movement, and to argue that the Aegean, especially, was peripheral at most to the central east Mediterranean world – engaged (on the margins) only in LB3. While noting that distance and exotic status can offer power resources, as regularly argued in recent literature, we stress the issue of receptivity – and local negotiation of values and meanings. An import is rarely meaningful *per se*. Indeed, a key feature of many exports/imports is their generic, de-contextualised, nature (viz. the 'international style' and similar labels) – this is what enables them to travel, and to then be capable of the necessary local reception and manipulation. References back to a point of origin are thus weak and stereotypical at most. Meanwhile, at inter-elite level, some specific biographical references are more possible (objects marked with the names of Egyptian rulers for example), indicating the multiple concurrent trading worlds in operation. Until recently too much of the scholarly literature in the Mediterranean field is in effect anachronistic – not that we deny the limited relevance of nascent capitalism. We recognise the many problems and limitations identified with the primitivist and minimalist schools (see e.g. literature reviewed by Horden and Purcell 2000:566-567), but believe the modern challenge is to re-configure an ancient viewpoint through considerations of consumption/reception, in order to break away from both the inherently *modern* formalist positions, or aesthetic and ideological positions, still largely dominant in scholarship today concerning trade in the second millennium BC Mediterranean.

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Gifts listed in EA 14	**Same/ similar in material record outside of Egypt**
Gold	
Anklets, strung with stones	
Bracelets, inlaid	
Wide bracelets, strung with stones	3
Finger rings	3
Rings	3
Neck-plaques, with stones	3
Sandals	
Cosmetic boxes	
Cosmetic tubes with eye-paint	
Razors	
Spatulas	
Bowls	
Goblets	3
Oil containers	
Animal and plant-shaped oil containers	
Pails	
Container for bathing	
Bed, gold overlay, with female figurines for feet	
Bed, gold overlay	
Chairs, gold overlay	
Headrest, overlay	
Thrones, gold overlay	
Figurine of king's wife, gold overlay	
Figurine of king's daughter, gold overlay	
Knives, with pomegranates on pommels	
Gold and silver	
Cosmetic box	
Mirror	
Throne, gold and silver overlay	
Large statuette of king, gold overlay, on pedestal, silver overlay	
Silver	
Sandals	
Spatula for oil container	
Mirror, set with stones	
Spatulas for hair curling, with boxwood and ebony handles	
Barber's spatulas	
Bowls	
Goblets	
Jars	
Pomegranate	
Pails	
Pots	
Sieve	
Measuring vessels	
Washing bowls	
Jar and pot for brazier	
Box	
Box, upright, inlaid	
Beds	
Headrest	
Monkey figurine, with daughter on its lap	
Bronze	
Mirrors	3
Razors, with gold and/or silver handles	
Razors	3
Barber's spatulas, with bronze or ebony handles	
Pots, tall and regular	
Ivory	
Toggle pins	
Combs	
Oil containers	

Animal and plant-shaped oil containers Boxes, with ebony Boxes, stained Headrests, stained Pairs of furniture legs in shape of animal paws, stained Plant models	
Stone	
White stone bowl Goblets Jars of different kinds of "sweet oil" Jugs of "sweet oil" Cripple, with jar in his hand Animal and plant-shaped oil containers Pails Sieve Boxes, empty Headrests Onager figurine	3 3 3 3 3 3
Other	
Cosmetic tubes with eye-paint, fabric unknown Barber's whetstone Cloaks Cloaks for the king's bed Girdles Mantles, various weights Linen, various weights Linen, fine, with decorated borders Linen, red	3
Ship, of cedar, with gold overlay, and all its gear Small towable ships Chariots, gold overlay Horses	

Table 1. Comparison of named gifts from Amenhotep IV to Burnaburiash, upon his marriage to a Babylonian princess, in EA 14, versus attestation of such items in the material culture record outside of Egypt. The information for this table was gleaned/grabbed from Moran (1992) for EA14, and from Cline (1994); Jacobsson (1994); Lambrou-Phillipson (1990); and publications of major Levantine sites for 'record outside Egypt' column. The analysis is ***not*** a comprehensive, nor rigorous. It is merely meant to be *indicative.* It is clear that most of the goods circulating at the highest social levels are not visible in the available material record. Certainly precious metals and stones are more likely to have been recycled over time. It is equally apparent, however, that the commonest Egyptian finds outside Egypt – scarabs, faience bowls and rings, small figurines – were not the stuff of international exchange, but circulated through different networks lower down the social scale. Material comparable to the items in this list may be found across the eastern Mediterranean. Identification is complicated by the fact that elite tastes ran to cosmopolitan, international style one-offs, which could be manufactured in a number of places; the Levantine and Syrian ivory-carving industry being particularly active in the LBA.

Item	***Qty***	***sniw****	***deben***
grain basket	1-3	1	
matting basket	1		2-3
small cattle	1		2
donkey (female)	1		20-30
donkey (male)	1		26-40
cattle	1	4-6	
pig	1	1	
wooden box	1		2
coffin	1		20-40
wooden statue (not ushabti)	1		8-12
stone canopic jar	4		5
mss-tunic	1	1-	3
sdjy garment	1	2-4	10-16
dj3yt-cloak			10-60
razor (copper/bronze)	1		1-2
ivory comb	1		2
cosmetic stick (basic)	1		1
spike (for cutting tombs)	1		3.5-7
chisel	1		0.5-1.5
adze	1		7
knife	1		3
sesame oil	2 *hin***		1
fat	unknown	1/6	
bread	unknown		1/10-1/5
fish	unknown		3-5
vegetables	1/2-2 bundles		1
leather hide	1		15
bronze vessel	1		4
kbw-storage jar (large), ceramic	1		9
kbw-storage jar (large), bronze	1		20-37
incense	1 *hin*		0.25
papyrus roll	1		2

Table 2. A sample comparison of prices in the 19th dynasty gleaned from Janssen (1975).
* 1 *sniw* = 5 deben
** 1 *hin* = 0.48 litres

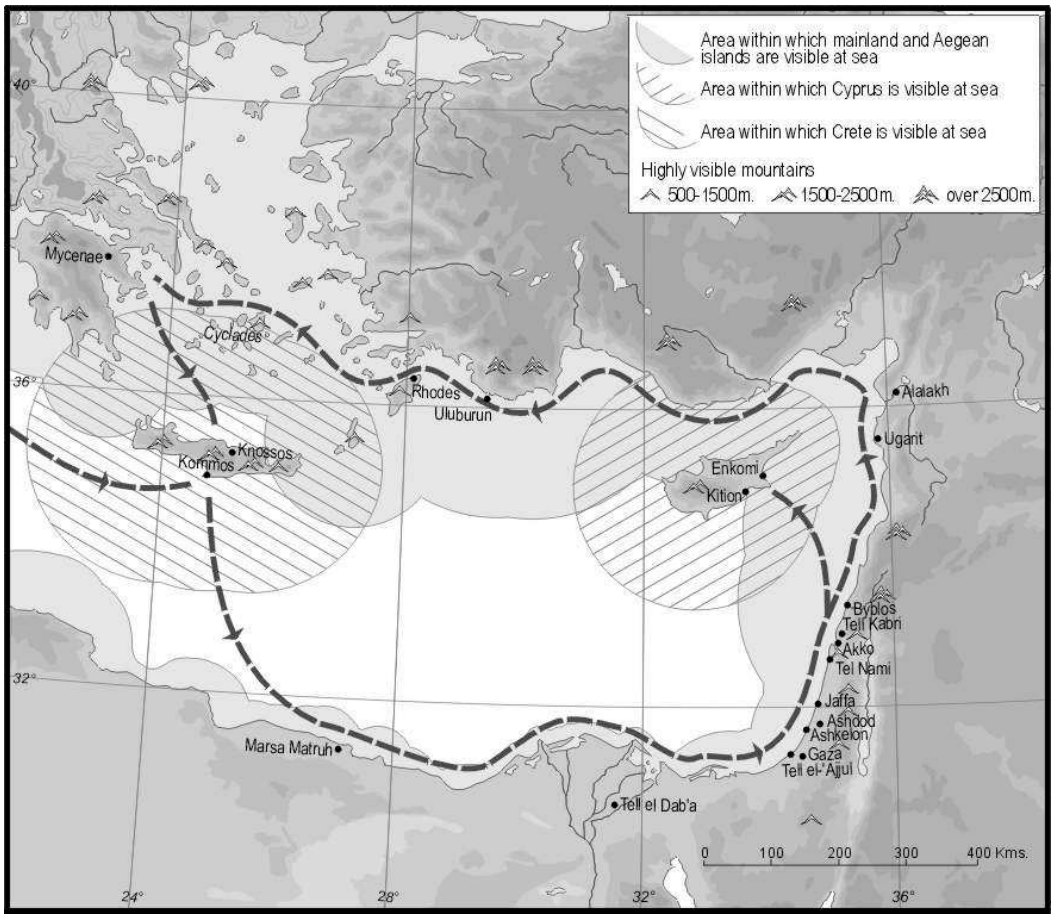

Figure 1. Explanation for map: plain shading around the Mediterranean and Aegean coastline indicates sea areas from which the mainland is visible, while hatched areas around Crete and Cyprus indicate sea areas from which those islands are visible. Areas of overlap show where a sailor could see both his origin and his destination at the same time. For example, the shading shows, for instance, that a ship sailing to Cyprus from Byblos would not sight land until about half way through the voyage, whereas on the return voyage Mt Hermon and Qurnat as-Sawda would be visible from the harbours of Enkomi or Kition.

High mountains inland contribute to the area of visibility far more than coastal features of modest height, as shown by the relatively small number of large curves making up the edges of the shaded areas. The approximate distance at which land is first seen by an observer at sea is calculated by the formula: D= 1.17 x sqrt(L) + 1.17 x sqrt(O)

Where D=distance in nautical miles
L= height above sea level of land in feet
O= height above sea level of observer in feet

This formula takes account of refraction by the atmosphere, but ignores changes in refraction caused by changes in barometric pressure. All calculations were performed in feet and nautical miles, and converted into metric units as required. It was assumed that the height of the observer was 3m – roughly twice the height of a man. Thus this is a relatively conservative interpretation (whether from built structures/masts on a ship, or from 1st stories, etc., of buildings on land).