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ESSAYS ON THE LATE PREHISTORY
OF THE ARABIAN PENINSULA

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IN-BETWEEN THE GREAT POWERS
THE BRONZE AGE OMAN PENINSULA

This paper is an attempt at describing and interpreting foreign contacts and their impact on the cultural evolution of the Oman Peninsula through one and a half millennia. By doing so, we use archaeological data to reconstruct history, even though it is restricted to long term trends; this has been a characteristic of many papers published on Gulf archaeology in the last twenty years¹. A general agreement among archaeologists about the location of the lands of Dilmun and Magan which are quoted in cuneiform sources allows us to introduce lands without written records into historical discussions. Dilmun was identified with the Arabian coast between Failaka and Qatar, and Magan with the Oman Peninsula, whatever reservations some of the most prestigious assyriologists may suggest. As such, they acquired a status in the centre-periphery relation oriented towards the Mesopotamian "world economy" proposed by Kohl². Dilmun became an entrepreneurial entity prospering on the edge of the Centre, on the model of European early capitalist city-states, while distant Magan had the less enviable status of a third-world raw material producer which could even have been "colonized" by the Sumerians³. Excavations of the last decade have disclosed the symmetrical importance of yet another urbanized centre of the Middle-East, the Indus civilization, and a second centre-periphery

¹ CLEUZIOU 1992; EDENS 1992, 1993 or POTTS 1993a, b, to quote only recent literature. These papers were able to use the preliminary results of a large amount of fieldwork in the Gulf and in the Oman Peninsula, which was not available to many earlier papers by the same authors. Both these papers and the earlier ones have become no more than pieces for the history of Gulf archaeology, as the present essay is bound to be. We entrust the specialists of sociology of science the task of saying if this is an effect of the "publish or perish" pressure, or the result of the rapid progress of knowledge.

² KOHL 1978.

³ DURING-CASPERS 1970, p. 250.

distance "partners" different. our knowledge about it also varies considerably.

Direct neighbours like south-eastern Iran, the Arabian coast of the Gulf, and the landmass of the Arabian Peninsula represent a second and very important level of study. Relations with south-eastern Iran were advocated early on¹⁰. Oman appeared to be culturally linked to these areas by sharing a similar pottery tradition. It was often suggested that the "Land of Magan" could encompass both the Oman Peninsula and the coastal area north of the Strait of Hormuz. Further studies¹¹ have reached a good knowledge of these relations, and induce to conclude that pottery in Oman was adopted from the south-eastern Iranian tradition. Many other cultural features from these two areas (settlement patterns or collective burials) are however completely different and this is the reason why, as far as archaeology is concerned, Magan is now usually restricted to Oman itself.

Relations with the Arabian coast of the Gulf have been known for a long time. The question of cultural borders and relations between the archaeological lands of Magan and Dilmun is of great interest but needs further study of local contexts, including the setting of a better chronological frame¹².

A few authors only insist on the fact that the Oman Peninsula is first of all a part of the Arabian landmass¹³. This is the result of an over-emphasis put on relations with Mesopotamia, combined with a poor knowledge of Arabia's recent prehistory. The arguments used to tie Magan with Arabia are less grounded on "objective" data (*i.e.*, presence/absence of objects) than on community in man-environment relationship, such as the persistent sub-Neolithic state of an economy strongly compounded by foraging activities until the very end of the fourth millennium BC, or the importance of kinship in the shaping of society.

This distinction is not always easy to trace, as second level countries had themselves close relations with countries of the first level. Relations between Magan and Dilmun for example, are often mixed with the study of relations between Magan and Sumer through Dilmun, or between Harappa and Dilmun, even between Harappa and Sumer, and the same is true for relations between Magan and south-eastern Iran. Therefore we

¹⁰ DE CARDI 1970, LAMBERG-KARLOVSKY & TOSI 1973.

¹¹ BLACKMAN *et al.* 1989; MÉRY 1991, 2000.

¹² For "Magan-type" pottery in the Dilmun area, see CLEUZIQU 1988, p. 46-48; for Dilmun-type material in Magan, see POTTS 1993a, p. 429-32.

¹³ TOSI 1986a; CLEUZIQU & TOSI 1989.

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shall concentrate on the study of relations with the large powers of the first level, unless these second-level relations prove to be necessary for our demonstration.

The ecological and cultural diversity of the Oman Peninsula and its evolution constitute the third level of analysis. It had little in common with the urban configurations of early states across the Middle-East and can be described as: "a highly integrated aggregation of farmers, fishermen and nomadic herders [whose] cultural homogeneity was the product of political formations we are still unable to define, but likely to forestall historical Arab ways of life and social institutions"¹⁴. It was grounded on a complex and efficient network of exchange which made life possible in various areas, by conveying very early on objects of prime necessity including food (in the shape of dried or salted fish from the coast for instance), in close association with items of a more symbolic value, both of local and foreign origin. Dialectical relations of economic mutual interest and social (lineage) competition patterned this network. The apparent opposition between coastal and interior communities¹⁵ should be taken with some care. Regional studies in the Ja'lan area around Ra's al-Jinz have disclosed more complex systems of integration, with multiple resources used by a same community, where movement of people is at least as important as exchange between nucleated sedentary communities.

At these different levels, the study of foreign relations depends on various types of data, mainly archaeological, textual and palaeo-ecological. Each of these categories refers to its own logic and should be treated accordingly. Even though the aim of the study is the same, a sherd, a quotation in a text or a charred grain of sorghum cannot be considered as equal evidence. The occurrence of a few imported sherds does not "stand in stark contrast to the impression given by cuneiform sources in which Magan seems to do a disappearing act..."¹⁶. We are only dealing with a different piece of information, whose meaning therefore is different. Even the mixing of such data in summarizing tables, albeit useful, may in fact be confusing.

Archaeological data include allogeneous objects discovered in Oman and items or raw materials found outside the peninsula, yet possibly of Omani origin. Allogeneous objects range from foreign imports to various levels of

¹⁴ CLEUZIQU & TOSI 1989, p. 17.

¹⁵ EDENS 1992, p. 128.

¹⁶ POTTS 1993a, p. 429.

influence, including a simple copy, or an inclusion of selected features into local productions. Archaeologists should be aware that such objects were not discarded by the ancients in order to help them set their chronologies. They should examine the many aspects of production, exchange and use, before they give a meaning to a potsherd in a particular context.

A single toothbrush-handle found in the highlands of New-Guinea could simply mean that there is a missionary (or an ethnographer) in the area. Alternatively, many authors could instead choose to refer to the trade of such items and their use as nose ornaments until – perhaps as a result of the aforementioned missionary or ethnographer's presence – the items are once again used as toothbrushes. Ethnographical literature discloses many similar cases¹⁷. The occurrence of a foreign object may therefore refer to a large variety of technical or social dimensions, including unpredictable ones, and every sector of the host society is involved. In our example, toothbrush-handles replace *Ovula ovum* shells and their symbolic value as an important status symbol for men. Before we assign a meaning to foreign objects from Bronze Age Oman, we should try and approximate this meaning against their finding context. The growing interest for production techniques in archaeology in the past decade, and its first achievements in south-western Asian archaeology allows to some extent this kind of study, but it should be enlightened by reflections in the field of cultural technology¹⁸. Several examples treated here demonstrate that this is not always an impossible task. The use of textual evidence by archaeologists is also a very difficult one. The difference in perspective between assyriologists¹⁹ and archaeologists is obvious. It is amazing to see how assyriologists expect that archaeologists will some day find the clues to their historical reconstructions, while the archaeologists urge them to look for new texts which could confirm archaeological studies. Mutual misunderstandings are numerous. For a long time, it was considered that a text like CT 7.31 indicates the occurrence of Magan boats at Girsu in the 3rd Dynasty of Ur, although it only discloses a list of materials used for the construction of Magan-type boats²⁰, admittedly a superb document when

¹⁷ Their name, 'gumen Sema'a' refers to the German word *Gumi*. They must be white or very light pale blue and were first brought in the early seventies by young men who worked on plantations on Buka island near Bougainville. This example was selected among many others, after discussion with Pierre Lemonnier.

¹⁸ LEMONNIER 1992; PÉTREQUIN 1993.

¹⁹ Among them HEIMPEL 1987; GLASSNER 1993 and this volume.

²⁰ HEIMPEL 1987, n. 39.

matched with archaeological data²¹. The difficulties are perhaps best illustrated by the current discussion about cereals exports from Mesopotamia to the Gulf. This subject was proposed for the *Oman Peninsula by During-Caspers following Leemans*, and was developed in a more general perspective of Gulf trade evolution by Edens, but is firmly rejected by Potts²². The argument and its rejection are based on the same texts, which are considered as either reporting “massive amounts of barley entering the Gulf” (Edens) or suggesting that “the putative mass export of Mesopotamian cereals to Magan is illusory” (Potts). This discussion is important for the shaping of relations between Oman and Mesopotamia, and we shall refer to it again.

Archaeologists are usually careful in using bio-archaeological data, they are little at ease with their logic and prefer to leave them to specialists. These can attest that a cultivar like *Sorghum bicolor* moved from Eastern Africa (or Yemen) to the Indian subcontinent, thus suggesting the existence of relations that cannot be specified²³. Phytogeneticians have proposed this movement for a long time²⁴. Adversely, using isolated bio-archaeological arguments in archaeological reasoning may lead to erroneous or weak conclusions.

One should not refute that cereals were imported from Mesopotamia²⁵ by merely advocating a few preliminary studies on dental wear, nor by adding the alleged presence of wild wheat and barley; these actually *never* existed at Hili or in eastern Arabia²⁶ but were brought there as cultivars by the end of the 4th millennium BC. The above quoted passage of Potts illustrates the confusion between levels and types of information that we are trying to avoid here.

One last – technical – problem for this study of distant relations is the necessity of a coherent chronological frame. This frame does not exist. Its absence is the result of a discrepancy which is never discussed, but

²¹ CLEUZIQU & TOSI 1994.

²² DURING-CASPERS 1989; EDENS 1992, p. 127; POTTS 1993a, p. 424-425.

²³ CLEUZIQU & COSTANTINI 1980.

²⁴ VAVILOV 1951, p. 22-3; HAUDRICOURT & HÉDIN 1943, p. 154. A few years ago, one of us told André Georges Haudricourt about the discovery of *Sorghum bicolor* at Hili and the significance given to it by archaeologists. Haudricourt answered that for him this was nothing new as the question was settled since a long time. Geneticists find the clues of their “historical” reconstructions in their own science.

²⁵ POTTS 1993a, p. 425.

²⁶ This is certainly not written in the two references quoted by this author (CLEUZIQU & COSTANTINI 1980; CLEUZIQU 1989, p. 79-80).

nevertheless hinders and will increasingly hinder studies between Mesopotamia and the Indus. The chronology grounded on calibrated radiocarbon dates which is now admitted for the Indus civilization *cannot* be equated with the “mean” historical chronology commonly used in Mesopotamia, which is clearly lower if one refers to the few radiocarbon dates at hand²⁷. Calibrated radiocarbon dates are in fact closer to the “long” Mesopotamian chronology previously used by some authors. One can understand that archaeologists, who have been suspicious of calibration (and even of radiocarbon dates) for a long time, are reluctant to reactivate a discussion which seemed to be settled. The effects of this discrepancy are variable according to the period under study and the chronological precision which is needed. Whether Jamdat Nasr should be dated from 3300-3100 or 3100-2900 BC is only a minor problem, nevertheless there are very serious difficulties arising for the second part of the third millennium BC.

This could be the reason why there is no chronological chart for Bronze Age in the largest synthesis on Gulf archaeology²⁸, it certainly explains the difficulties in comparing Oman (dated according to calibrated ¹⁴C) with Bahrain (dated by comparison with the historically grounded Mesopotamian chronology). A sentence like “If we work on the basis of the calibrated dates we are looking at a context that would be contemporary to the end of the Akkadian period”²⁹ associates two obviously conflictual chronological systems, where the second system is dated according to Brinkman. More elaboration is needed and we shall not discuss the problem further. Like everyone else, we try to avoid difficult situations and therefore we assume that the dates of archaeological assemblages do not necessarily match exactly the chronology of the rulers or dynasties after which they are named. However, this is unsatisfactory as linking archaeological configurations with historical situations – a risky task by itself – becomes difficult, if not hopeless.

EARLY PATTERNS OF EXCHANGE IN THE GULF

Relations between Oman and Mesopotamia are attested by “objects” since the late 6th millennium BC: the consistent presence of Ubaid painted

²⁷ BRUINS & MOCK 1989.

²⁸ POTTS 1990a.

²⁹ POTTS 1993a, p. 427.

sherds in Gulf coastal settlements such as Dalma island³⁰, or the northern coast of the United Arab Emirates³¹ at al-Qassimiya, al-Zuhra and Nad al-Walid. Pottery analyses leave no doubt about a Mesopotamian origin for Ubaid sherds found in the Gulf, and their interpretation has been widely discussed, mainly in the perspective of Bahrain and eastern Arabia. Oates and others³² advocate that: "significant numbers of Ubaid inhabitants of ancient Sumer actually travelled to what is now eastern Arabia, Qatar and Bahrain, carrying pottery from home among their personal luggage, perhaps as containers for food or other products but apparently largely for their own personal use". But it seems much more likely that the coastal communities of the Gulf, rather than southern Mesopotamians, were responsible for the diffusion of painted potteries until the strait of Hormuz³³. Masry suggests that: "A pristine cultural tradition was seen to have existed [in Bahrain and coastal Arabia] before the development of material-culture parallels (primarily consisting of painted pottery) with Mesopotamia"³⁴. Even if we do not share Masry's opinion in all its developments, a symbolic and material value cannot be excluded for Ubaid pottery in the Gulf.

So far, Ubaid sherds found in Oman are only a testimony of the involvement of the Trucial coast settlements and/or campsites in some kind of network that channelled their circulation. Contrary to the situation in the Dilmun area, where Ubaid pottery occurs in large quantities at A'in Qannas³⁵, a hundred miles inland, these sherds never penetrated into interior Oman. This unintegration of pottery in the material culture of the Oman Peninsula is confirmed by the particular status of a single imported gray ware pot of probably south-eastern Iranian origin in a late 4th millennium context at Ra's al-Hamra, which was used to heat bitumen³⁶, and the late development of pottery use in the Hili sequence³⁷. This fact fits rather well with the low cultural aggregation postulated for this early period³⁸. The contextual evidence is missing, but one explanation could be

³⁰ HELLYER 1992.

³¹ BOUCHARLAT *et al.* 1991; HAERINCK 1991; UERPMANN 1992, p. 91-92.

³² OATES *et al.* 1977, p. 232.

³³ PIESINGER 1983.

³⁴ MASRY 1974, p. 183.

³⁵ MASRY 1974, pl. 21-23.

³⁶ CLEUZIQU & TOSI 1989, p. 30-31.

³⁷ CLEUZIQU 1989 a, b.

³⁸ CLEUZIQU & TOSI 1989, p. 25.

the complete lack of local pottery production. On the other hand, pottery may have been integrated to some extent in the material culture of the upper Gulf, since Ubaid sherds in Dilmun are often associated with a light red chaff-tempered ware considered as locally manufactured³⁹, and they could possibly be the origin of a local pottery tradition⁴⁰. This was never the case in Oman, where locally manufactured pottery appeared much later, with a completely different technical tradition.

POTS FOR THE ANCESTORS

The wide diffusion of Jamdat Nasr and Early Dynastic I Mesopotamian vessels across the whole Peninsula around 3000 BC, which was first evidenced by Doring-Caspers, occurred in a completely different situation. The few centuries around 3000 BC were a key-point in the evolution of the Oman Peninsula. Several elements coalesced rather quickly in interior Oman to shape into a cultural model which remained practically stable until 2000 BC: oasis agriculture associated with herding⁴¹, permanent settlements⁴², copper exploitation and pottery production, collective burial cairns. The formative process goes back to the 5th and 4th millennium as evidenced by the presence of *Sorghum bicolor* and domesticated cattle at the coastal site of Ra's al-Hamra, already by 4000 BC⁴³. We have as yet no evidence of 5th or 4th millennium settlements in the interior, but the forms of landscape use, which were already shaped around 3000 BC at Hili, appear to be the result of the combination of local elements (palm-tree, possibly donkey) and foreign ones (ovi-caprines, cattle and cereals). These foreign elements were channelled through contacts with neighbouring countries of our "second level" (South-Arabia, Indo-Iranian borderlands), although it is likely that some originated from more distant regions (eastern Africa for instance). The Arabian landmass, being a part of the Saharan-Arabian area of phytogeographers, was certainly important in this process, as evidenced by the east-African or south-Arabian origin of

³⁹ OATES *et al.* 1977, p. 231-32.

⁴⁰ PIESINGER 1983, p. 732-33.

⁴¹ CLEUZIQU & COSTANTINI 1980.

⁴² CLEUZIQU 1982.

⁴³ BIAGI *et al.* 1985, 1989, UERPANN 1989, The identification a charred grain from RH-5 as *Sorghum bicolor* has however recently been abandoned by its authors (BIAGI & NISBET 1992).

*Sorghum bicolor*⁴⁴. Questions about herding are still pendent, but even though the Indo-Iranian borderlands may have played a part, the importance of southern Arabia should not be underestimated⁴⁵.

The sequence at Hili 8 (Table 3) demonstrates that pottery was already manufactured in interior Oman at that time, and that the level of technical skill and ability included the use of elaborate kilns. This implies that the knowledge was borrowed from elsewhere, and both techniques, shapes and decorations point to the Indo-Iranian borderlands⁴⁶. However, pottery remained poorly integrated in daily life and craft activities. Neither large jars nor bottles nor cooking pots were recovered. Pottery dated from the early 3rd millennium BC is hardly ever found at the settlement of HD-6 at Ra's al-Hadd, and only 101 sherds from less than sixty vessels were recovered from all of period I at Hili 8, over a time span of at least three centuries.

The origins of copper exploitation in Oman should probably also be sought in the links with the more technically advanced areas of south-eastern Iran, and there is a relation between the borrowing of this technology and that of pottery production from the same area, since both are related to the use of sophisticated pyrotechnology. The stage of incipient production already postulated may have allowed the setting of this technological transfer for copper exploitation. Excavations at Ra's al-Hadd HD-6, where copper was widely used to produce pins and fish hooks, suggest a rapid diffusion of this technology across all of the economic regions of the Oman peninsula. A few copper pins and blades occur at Hili 8 in period I⁴⁷ and in contemporaneous cairn burials.

Although Mesopotamian texts do not mention Magan for that time, some copper from Oman nevertheless did reach Mesopotamia through Dilmun according to the quotation of Dilmun copper in Uruk archaic texts⁴⁸. There is no copper source in the area identified as Dilmun, and the metal most probably came from Oman. In his review of Gulf trade as seen from Mesopotamia, Edens assumes that "copper production [in Oman] is still little known during this period and was probably small scale and directed principally at local consumption" and he concludes in the weakness of a trade mainly based on luxury products as a socio-economic

⁴⁴ CLEUZIQU & COSTANTINI 1980, p. 250.

⁴⁵ CLEUZIQU & TOSI 1997, p. 126; CATTANI & BÖKÖNYI, this volume.

⁴⁶ CLEUZIQU & TOSI 1989, Fig. 6; MÉRY 1991b, p. 72.

⁴⁷ CLEUZIQU 1989b, Pl. 33 n. 2-5.

⁴⁸ ENGLUND 1983.

force⁴⁹. What may seem true as seen from Mesopotamia is completely different when seen from Oman. The Mesopotamian demand for copper and raw material in the late 4th millennium BC could benefit from the long existing maritime networks in the Gulf, even though it is highly unlikely that this network was the reason for copper exploitation in the area. It became possible to meet Mesopotamian demand because the technology for copper exploitation was already mastered in Oman, together with elements that allowed a redevelopment of food production, transportation, preparation of hides, gathering of wood for fuel, *etc.* This reorganization induced considerable changes in Omani society, and the main archaeological aspects have already been mentioned. The returns for these exports, whatever they were, played themselves a part at various economic and symbolic levels. Among these returns, the most obvious are Mesopotamian potteries.

Mesopotamian vessels are found in cairn burials all over the Oman Peninsula⁵⁰, and they are the only type of pottery occurring in this type of burials. The main bulk comes from the large cairn-fields overlooking the early oases of the interior such as al-Ain, where the settlement of Hili is located, (Jabal Aqlah and Jabal Hafit), Ibri, Bat, Amlah, *etc.* They are also reported from coastal settlements, both on the Gulf at Jabal Dhanna⁵¹ and on the Indian Ocean at Ra's al-Jinz RJ-6. Most pots can be related to a single main type: small jars with cylindrical neck and bevelled everted rim (Fig. 2a, b), but a few variants occur, of which the best known is a small jar with double carination, often with a preserved typically Jamdat Nasr bichrome painting. Mesopotamian wares also occur at Hili 8 in period I (Table 3). They amount to *ca.* 50% of a very small assemblage which is also restricted in types, and is only composed of medium and small-sized jars⁵². Archaeometrical studies (Fig. 3) demonstrate that all these potteries were imported from Mesopotamia and were probably never copied, even though specialized pottery production centres of the interior had the ability to do so, according to what is known from their own production⁵³.

It therefore appears that a particular type of Mesopotamian pottery was selected among the items reaching Oman through the Gulf exchange network, to be deposited in the graves. The part played by this item in

⁴⁹ EDENS 1992, p. 131.

⁵⁰ For up to date inventories, see POTTS 1986, 1990a.

⁵¹ VOGT *et al.* 1989, Pl. 8 n. 3.

⁵² CLEUZIQU & TOSI 1989, Fig. 5.

⁵³ MÉRY 1991b, p. 72; MÉRY & SCHNEIDER 1996.

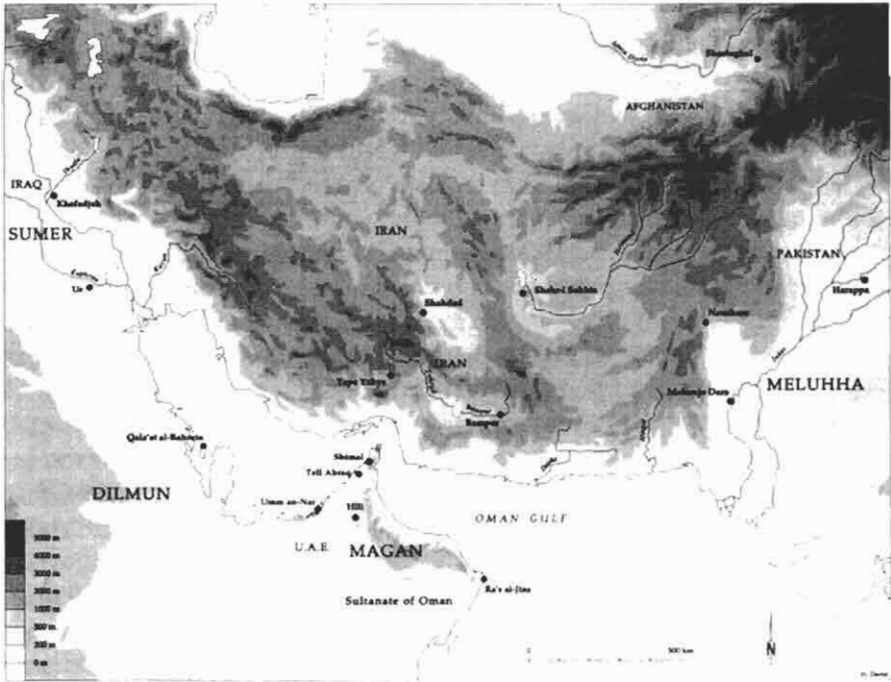


Fig. 1 - Map of Middle-Asia.

daily life was almost non-existent, but for unknown reasons, which we could call a choice in the sense of Lemonnier⁵⁴, it played a part in funerary rituals. Omani society on the move chose to link it to a very sensitive ideological aspect of its development, the newly adopted type of collective cairn-burials which dotted the landscape over the new oasis settlements and thus materialized a new territorial organization. It was also a deliberate choice not to copy these potteries. The reasons for these choices were arbitrary and belonged to Omani society only⁵⁵. To some extent, this gives us a measure of the importance granted by Omani society to the connection with distant Sumer; this was a constant connection since Mesopotamian pots were an almost compulsory part of burial goods, but we have little information about the exchange system itself. In a comment

⁵⁴ LEMONNIER 1993.

⁵⁵ On arbitrariness of such signs in material culture, see LEMONNIER 1993.

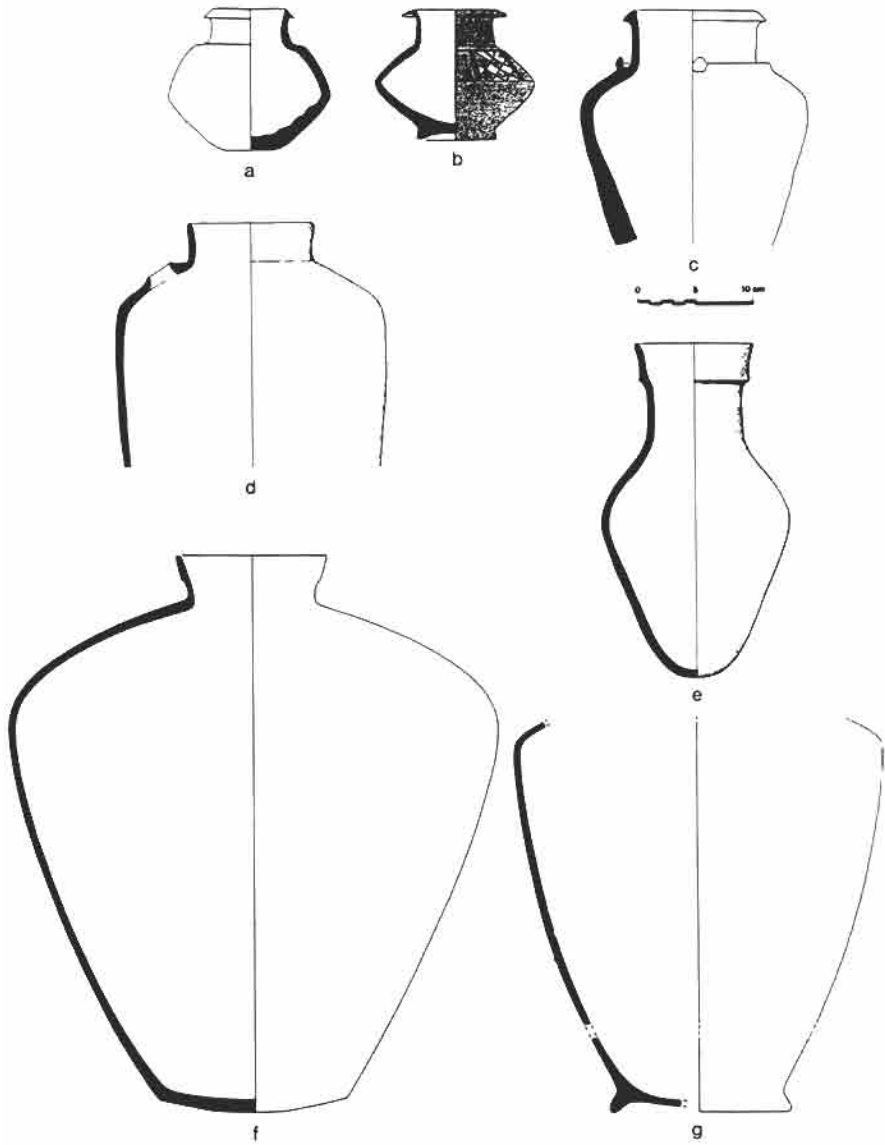


Fig. 2 - Mesopotamian types of vessels from third Millennium graves (Qarn Bint Sa'ud, Buraimi, Umm an-Nar) and settlements (Hili 8) in Oman. *a*) Qarn Bint Sa'ud BS 138 (after AL-TIKRITI 1981, Pl. 57A); *b*) Buraimi I, BM 134636 (after DURING-CASPERS 1971, Fig. 6); *c*) Hili 8, H8/2561 UF820; *d*) Umm an-Nar grave V, 1089.N (after FRIFELT 1991, Fig. 179); *e*) Umm an-Nar grave I, 1010.T (*ibid.*: Fig. 86); *f*) Umm an-Nar grave VII, 1091.B (*ibid.*: Fig. 207); *g*) Umm an-Nar grave V, 1089.O (*ibid.*: Fig. 181).

of Potts⁵⁶. Wright wonders about the possibility of a glass-bead trade similar to what Arabs and Europeans used to trade in their exchanges with Africa some centuries ago. Other low-value items, easier to transport, could have been involved as well, and copies of Mesopotamian potteries could easily have been manufactured in Oman, if Omani society had chosen to do so. There is nothing which could indicate whether these vessels were, or were not, a means of payment. All that we know is that at some time, these pots were valued independently from their contents (assuming that they contained anything), or from their function. The reason why they are no longer found in burials after 2750 BC should be related to another arbitrary choice, whereby these potteries no longer retained their previous value. Once again, this could be some kind of information about Omani society and has probably nothing to do with the exchange network itself.

AND ALSO POTS FOR TRANSPORT

By 2750 BC Omani society was already shaped into what is called the "Umm an-Nar" culture (Table 1). This date is only indicative, as we are dealing with a continuous process. Many features related to Umm an-Nar culture already occurred in the previous centuries such as collective burials, or settlements with towers. In the interior, Mesopotamian pottery still occurs at the settlement of Hili 8 in phases IIa and b in the shape of sherds from transport jars with ring bases; but it disappears in phase IIc2, when real use of pottery begins on the site, around 2600 BC (Table 3). Pottery becomes more integrated in the material culture of the Oman Peninsula. Local black-on-red painted wares are manufactured according to the technical tradition already existing at the end of the 4th millennium. On the other hand, small Mesopotamian vessels are no longer a typical item of funerary assemblages. From now on, they include many more vessels than previously, and most of them are produced locally. Very few vessels from Umm an-Nar tombs can claim a Mesopotamian origin. A jar of ED III type was discovered near Ja'lan Bani bu Hassan⁵⁷. Jars belonging to a well-known type of Late Akkadian period were found in graves of the end of the Umm an-Nar period at Hili

⁵⁶ POTTS 1986, p. 169.

⁵⁷ EDENS 1990, p. 45 & Fig. 41 n. 1.

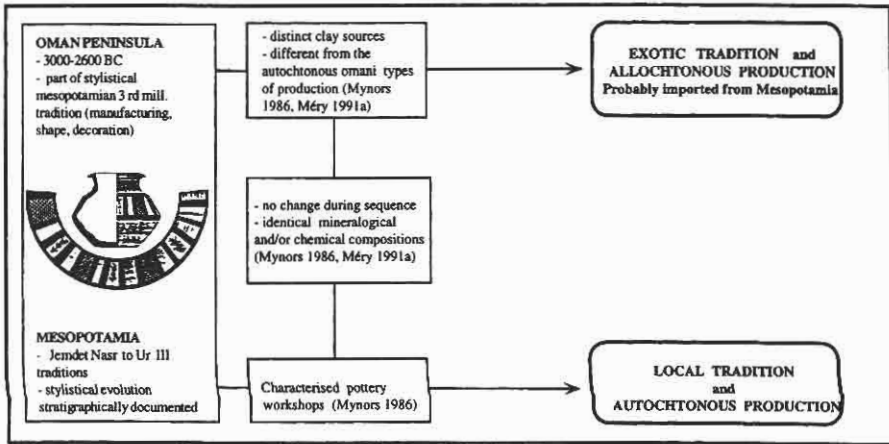


Fig. 3 - Reconstruction of the origin of the Mesopotamian types of vessels found in Oman during the third millennium BC.

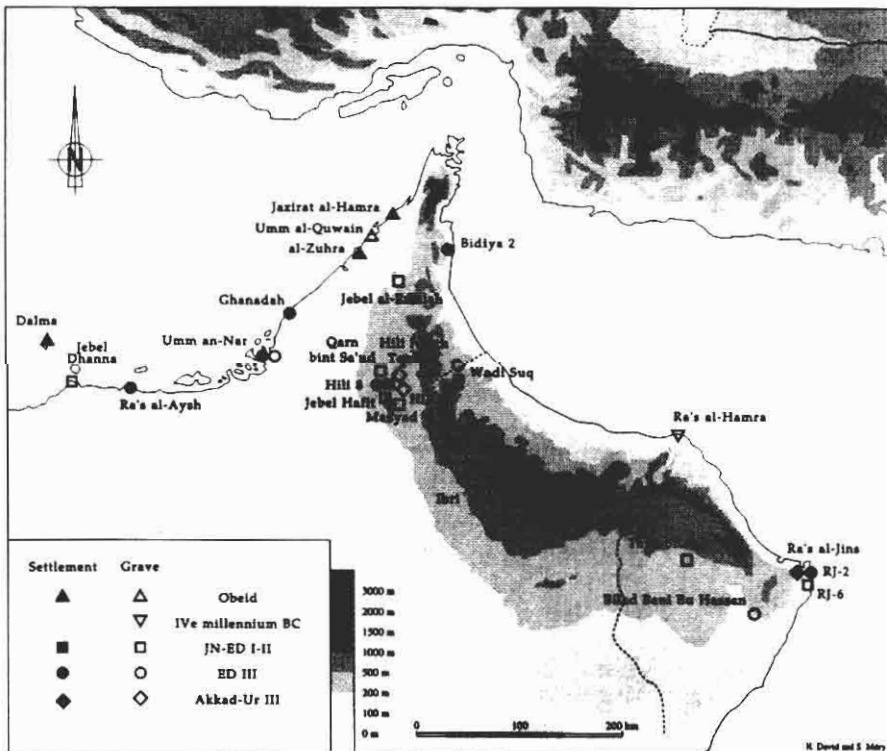


Fig. 4 - Distribution of third Millennium imported Mesopotamian vessels across Oman.

TABLE I

Tentative chronology of protohistoric Oman, 3500-1300 BC Radiocarbon dated sites.

B.C.	Historical Mesopotamian sequence	Archaeological Omani sequence	Hili 8	Ra's al-Hamra	Ra's al-Jins	
3500	Uruk			IV	RJ2 PI	
3300				V		
				VI		
3100	Jemdet Nasr			VII		
2900	DA I	HAFIT	I a b c			
2700	II					
2500	III A	UMM AN-NAR	II a-b c1 c2 d e f g			RJ2 PII
	III B					RJ2 PIII
2300	Akkad					RJ2 PIV
2100	Ur III			RJ1 RJ21		
1900	Isin-Larsa Old Babylonian	WADI SUQ	III			
1700						
1500	Middle Babylonian					
1300						

tomb N⁵⁸ and at Munay'i (in display at Ra's al-Khaimah National Museum)⁵⁹.

There is one salient exception however: imported Mesopotamian jars⁶⁰ remain numerous at the coastal settlement at Umm an-Nar until the beginning of the Akkadian period. Some were deposited in cairn-burials, but, as in interior Oman, the main bulk of funerary pottery consists of

⁵⁸ AL-HADDU 1989, Fig. 9.

⁵⁹ Dated according to NISSEN (1966, p. 75-76). A similar rimsherd was found at al-Abraq in Wādī Sūq layers, for which Old Babylonian parallels are advocated (POTTS 1990, Fig. 115).

⁶⁰ MYNORS 1983, p. 384.

TABLE 2
 Periodization of third Millennium BC graves in Oman.

B.C.	Interior Oman	Gulf coast	Indian ocean coast
3100	Hafit	Jebel Dhana	Ra's al-Jinz RJ-6
2900			
2700	Hili M	Umm an-Nar V, VII	
2500	various graves at Hili	Umm an-Nar I, II	?
2300	Hili Nord tombs A & B Hili 1059	Shimal Unar 1 & 2	Ra's al-Jinz RJ-11 ?
2100		Ajman tomb B al-Abraq	

locally manufactured painted red ware. In the oldest graves, typically ED I spouted vessels with cylindrical neck (Fig. 2d, from cairn V) occur, together with a large jar with narrow neck and band rim (Fig. 2f, from cairn VII). Pear-shaped jars with high cylindrical neck and collared rim, a typically ED III vessel, characterize the most recent group⁶¹. Mesopotamian jars of various types are also present at Ra's Ghanada⁶² but are not mentioned at Tell Abraq and are rare at Shimal⁶³. Several pieces of

⁶¹ FRIFELT 1991, Fig. 86-89 from cairn I, 125-127 from II, 200 from VI.

⁶² AL-TIKRITI 1985, Pl. 9, 10.

⁶³ VOGT *pers. com.*

TABLE 3

Percentages of the main pottery wares from Hili 8 settlement, between Period I and Period III. Iranian wares are not recorded.

HILI 8	Frequency for main types of wares				Total number of sherds
	Mesopotamian ware	Sandy Red Hili ware	Fine Red Hili ware	Harappan ware	
Period I	58%	5%	25%	-	60*
IIa-c1	25%	17%	58%	-	36
IIc2/d	0.5%	85%	14%	-	205
IIe	-	89.5%	9.5%	1%	408
III	-	93%	5.25%	0.5%	913

* This number refers to the minimum number that was possible to define out of 101 sherds, but the real figure is probably lower.

Mesopotamian ware seem to occur among Umm an-Nar and Indus material at Bidiya 2 on the Indian Ocean coast⁶⁴.

This leads to an apparent pattern of disappearance of Mesopotamian material in interior Oman, versus permanence on the coastal sites, occurring broadly during contemporaneous ED III, when the growing amount of copper used in southern Sumer and Susiana was almost exclusively imported from Oman, according to chemical analysis of Omani ores. It is therefore clear that the exchange network disclosed by *later Mesopotamian sources is simply not reflected in the preserved aspects of material culture in Oman*, and the state of our knowledge on relations between these regions during the second half of the 3rd millennium BC is almost fully dependent on Mesopotamian textual and archaeometrical evidence.

According to their shape, there is little doubt that the Mesopotamian wares discovered at Umm an-Nar were transport vessels, likely to have been re-used on the site and even in burials. We are even willing to accept that some of them were used to transport products like sesame oil, as proposed by Potts⁶⁵ on the suggestion of a later Ur III cuneiform text. From what we know at Ra's al-Jinz, pottery seems to be poorly integrated in coastal settlements, even in the second half of the 3rd millennium BC. It

⁶⁴ AL-TIKRITI 1989a, Pl. 79M.

⁶⁵ POTTS 1993a, p. 425.

occurs in smaller amounts and is probably less used. No pottery was produced at Ra's al-Jinz, nor probably at Umm an-Nar. This may be the reason why foreign imported wares seem to be so important in a restricted corpus, in the case of Mesopotamian wares at Umm an-Nar or Harappan wares at Ra's al-Jinz. They are almost "invisible" in the settlements of the interior due to the development of local Omani wares. These wares were not deposited in graves because they were no longer given a status once they reached their destination as containers.

POTS FOR TRANSPORT AND DAILY USE

Black-slipped jars (Fig. 5a-c) are certainly the most outstanding among the various categories of Indus material found in Oman⁶⁶. They are described at Mohenjo-Daro as category 4⁶⁷ and are well identified on Pakistani sites where, according to the few quantitative data available, they represent only a small percentage of the pottery assemblages. Their occurrence in Oman can now be safely dated from as early as 2500 BC, according to the sequence at Hili 8 where they first occur in phase II. They are also found in building I of period II at Ra's al-Jinz and are associated with ED III Mesopotamian material at Umm an-Nar or Ra's Ghanada⁶⁸. We can consider that this occurrence lasted until the end of the Umm an-Nar period since these jars are still found at Hili III and period III at Ra's al-Jinz⁶⁹. Each excavated Umm an-Nar settlement, and many others which were surveyed, have yielded sherds of black-slipped jars (Table 4)⁷⁰. Their occurrence is more important on the coast than in the

⁶⁶ See inventories in CLEUZIQU 1992; EDENS 1993; MÈRY 2000.

⁶⁷ DALES & KENOYER 1986, p. 83-84; 248-49.

⁶⁸ MÈRY 1991a, p. 241-44; CLEUZIQU 1992; FRIFELT 1995, Fig. 88.

⁶⁹ When they were first discovered in 1979 at Hili 8 in a period III context, the black-slipped jars were thought to be of the early 2nd millennium "Wādī Sūq" period, and therefore a date towards the end of the 3rd millennium BC was suggested and is still accepted in CLEUZIQU & TOSI 1989, p. 42 and Table 2. In fact, the paper was written in 1985 as a programmatic paper for the Ra's al-Jinz excavations which soon demonstrated the occurrence of such jars in the third quarter of the 3rd millennium. Also, they are never found in safe Wādī Sūq contexts, like sites RJ-1 and RJ-21 at Ra's al-Jinz. However, one must stress the fact that, so far, no safe occurrence of black-slipped jars was found at RJ-2 in a period IV context, and that their frequency seems to be significantly lower in the late period III (ca. 2200-2100 BC).

⁷⁰ At most sites, they range between 1 and 5, reaching 17 sherds at an intensively excavated site like Hili 8 (that is less than 1% of the material from relevant layers) and almost the same amount at Bat.

TABLE 4

Recorded occurrences of black-slipped Harappan jars in the Oman Peninsula.

Gulf coast	
Umm an-Nar	Frifelt 1995: fig. 221 KU 3
Ghanadah site 1	al-Tikriti 1985: 13, pl. 13B
al-Qusais	Vogt 1996: 120
Tell Abraç	Potts 1994: 617
Shimal	Franke-Vogt & Velde 1987: 88
Ghalilah	Vogt comm. pers.
Indian ocean coast	
Bidiya 2	al-Tikriti 1989: pl. 81A
Qurayat HQ-11	Cleuziou & Tosi pers. comm.
Ra's al-Hadd HD-1	Reade & Méry 1988; Reade in Cleuziou <i>et al.</i> eds. 1990: 35
Ra's al-Jinz RJ-2, RJ-3	Méry 1988: 42, fig. 34 n° 11, 12; Cleuziou <i>et al.</i> eds. 1990: 14, fig. 20
Interior Oman	
Asimah North	Vogt 1994: 175, fig. 75
Wādī Ashwani 3	Vogt 1996: 120
Hili 8	Cleuziou 1989a: fig. 8 n° 1-2
Wādī Far 1	Hastings <i>et al.</i> 1975: fig. 10ii
Bat	Frifelt 1975: fig. 34 f. 1976: fig. 7. 1985: fig. 5C (1145.GZ)
Araqi	de Cardi <i>et al.</i> 1976: fig. 25 n° 299
Amlah site 12	<i>Ibid</i> : fig. 20 n° 187
Maysar-25	Méry 1991a: fig. 155
Batin 1	Hastings <i>et al.</i> 1975: fig. 16H
Bilad al-Maaidin	Méry 1991a: fig. 155
Ibra 2	Hastings <i>et al.</i> 1975: fig. 21B

interior (with the salient exception of Asimah), and more specifically on the coast of Oman rather than in the Gulf. Ra's al-Jinz, Ra's al-Hadd and Asimah have each yielded several hundreds of these sherds⁷¹.

⁷¹ The number of black-slipped sherds is: 430 at Ra's al-Jinz RJ2, 306 at Ra's al-Hadd HD1 and 766 at Asimah (VOGT 1994). The minimum number of vessels is 18 at Ra's al-Jinz RJ-2, 7 at Ra's al-Hadd HD-1 and 11 at Asimah.

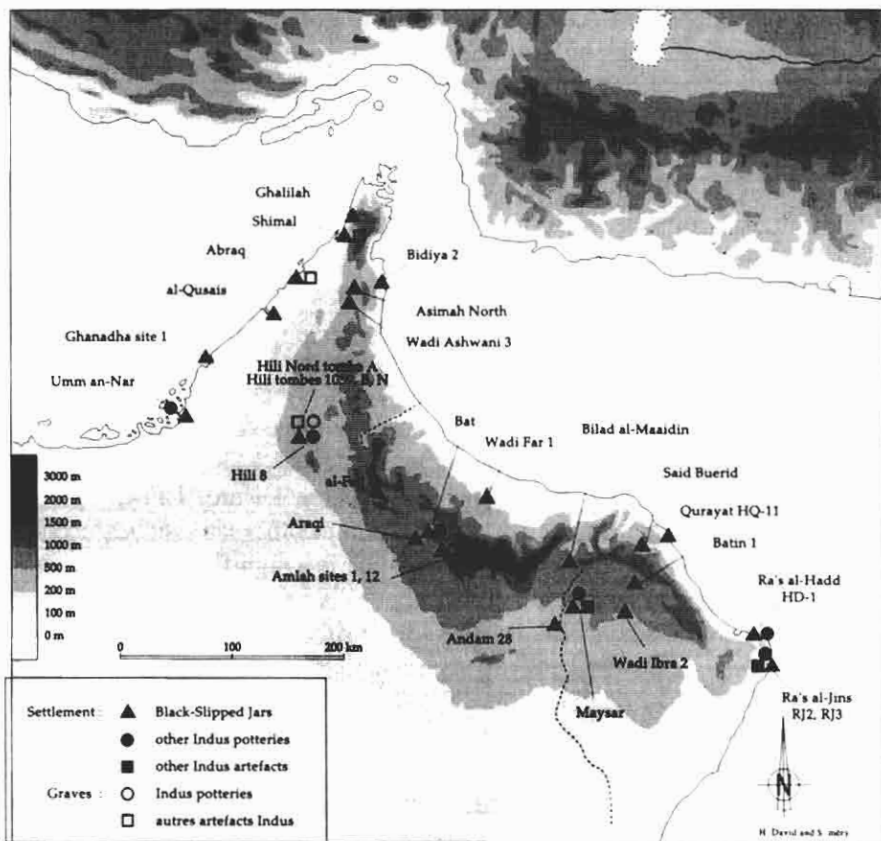


Fig. 8 - Distribution of imported Harappan artefacts across Oman.

beads can be considered as imported, like small biconical silver beads from tomb A at Hili North⁸⁷ and tomb B at Ajman⁸⁸, and fritte beads with lengthwise grooves from a late Umm an-Nar context in Ajman tomb B⁸⁹ and period III at Ra's al-Jinz RJ-2⁹⁰.

A prismatic stamp-seal engraved with animals (caprids, cattle, crocodile?) found at Maysar displays similarities with Harappan three-

⁸⁷ CLEUZIQU & VOGT 1985, Fig. 5 n° 4.

⁸⁸ AL-TIKRITI 1989b, Pl. 46 W.

⁸⁹ AL-TIKRITI 1989b, Pl. 46 D, Zb, Pl. 56c.

⁹⁰ CLEUZIQU & TOSI 1990, Fig. 19 n° 4.

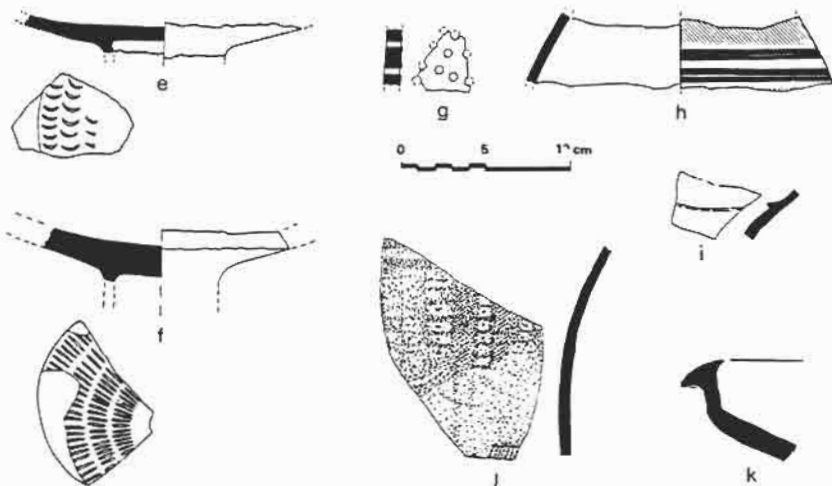
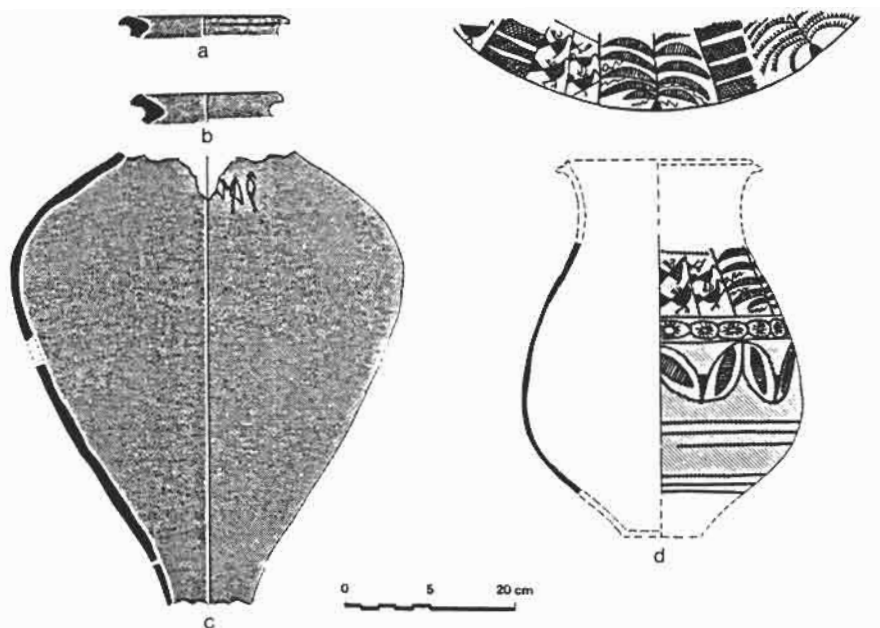


Fig. 5 - Harappan types of vessels from third millennium settlements in Oman: Hili 8 (e, f), Ra's al-Jinz RJ-2 and RJ-3 (a-d, g, h), Ra's al-Hadd HD-1 (i-k). a) RJ-2/417; b) RJ-2/378; c) RJ-2/552; d) RJ-2; e) H8/915 UF 67; f) H8/1944 UF 421; g) RJ-3/1; h) RJ-2/386; i) HD-1.337; j) HD-1.547; k) HD-1.460

Black-slipped jars strongly differ from the pottery of Umm an-Nar assemblages. They are quite standardized, considering the paste (fine micaceous red fabric), their shape (pear-shaped, narrow neck), capacity (30-70 litres) and making. The body is made of several assembled sections. A rope was coiled around it to avoid deformation while drying – a typically Harappan technique for large vessels – and they are covered with a thick sintered clayish varnish, dark-brown to black in colour. More often than any other Harappan vessel, they bear a short inscription on the shoulder or around their maximum width. The inscription was made after firing with a sharp point cutting through the slip and the paste. Five inscribed sherds are recorded at Ra's al-Jinz⁷² and at least three at Asimah⁷³. According to their shape, fabric and slip, and mainly because of their narrow neck which also allows easy sealing, these jars are excellent waterproof containers and are well adapted for the storage, transport and pouring of liquids or large quantities of small-sized solids. Moreover, they are easy to handle and can be fitted together standing side by side in the hull of a boat, like classical amphorae.

The mineral composition of black-slipped jars found in Oman matches exactly that of jars recovered in Pakistan. It is incompatible with the environment of Omani sites, but agrees perfectly with the mineralogy of large areas of Pakistan and north-western India⁷⁴. This fact, together with the strong discrepancy between the manufacturing process of the jars and the technology of Umm an-Nar pottery, induces the conclusion that black-slipped jars were certainly imported from the Indus area (Fig. 7). Moreover, no sherd was ever found that could suggest that they were copied, and it is clear that techniques used for manufacturing local Omani pottery would not have allowed the production of such vessels.

For all these reasons, there can be no doubt that black-slipped jars came to Magan as containers shipped across the Sea of Oman. Once sealed, the inscription – if there was one – allowed the identification of the contents or its destination, its owner or its producer. According to A. Parpola, the signs used in such inscriptions refer to personal names rather than to titles or common names. We have no direct element to determine what was transported, nor whether one or several products were concerned, but in all likelihood they were liquids or small solids. In a

⁷² TOSI 1986a, Fig. 24; CLEUZIQU & TOSI 1990, Fig. 20.

⁷³ VOGT 1994, Fig. 75.

⁷⁴ MÉRÉ 1991b, p. 66.

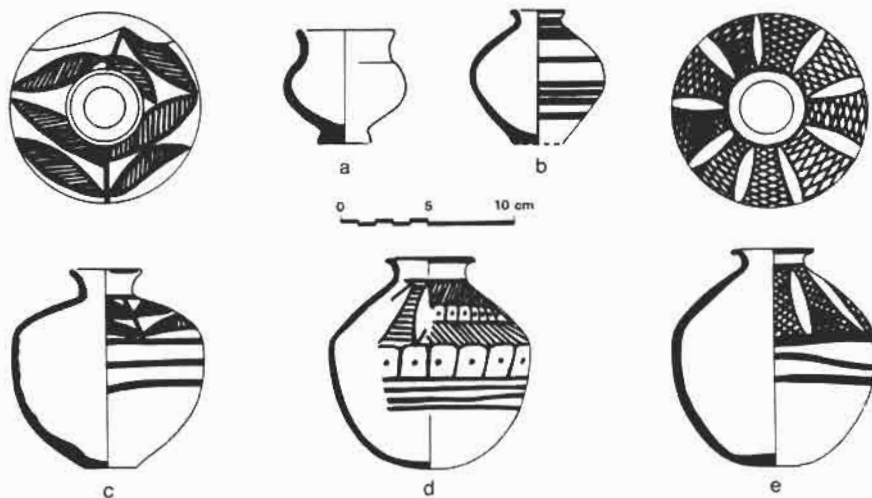


Fig. 6 - Harappan types of vessels from Tomb A at Hili North. a) V 64; b) V 349; c) V 134; d) V 105; e) V 156.

recent study on the impact of dairy products in the Indus civilization, Gouin suggests that at least one of these products could have been a variety of dried cheese⁷⁵. Other possibilities include clarified butter (ghee) which was traded across the Erythrean Sea in classical times according to the *Periplus Maris Erythraei* 14:5.11⁷⁶, and more generally food products. We do not know whether these products were unloaded for local consumption at places where black-slipped jars occur in large quantities, or whether they were transferred into other containers, or if both methods were used. The jars reached the interior loaded either with their original contents or with a new one. As already mentioned, they represent a commodity which could not be produced by local potters, and the suspicion is high that they were constantly re-used. Herodotus (III.6) mentions that the Persian power in Egypt had organized a compulsory re-use of Greek and Phoenician wine-jars to provide water transportation for the caravans crossing between Memphis and Syria⁷⁷, and there are numerous examples of similar re-use in traditional Middle-East. Anyone

⁷⁵ GOUIN 1990.

⁷⁶ CASSON 1989, pp. 59, 133.

⁷⁷ This text is quoted by MOUTON 1992, p. 255, while documenting a re-use of Greek wine-amphorae at Mleiha during the Late pre-islamic period.

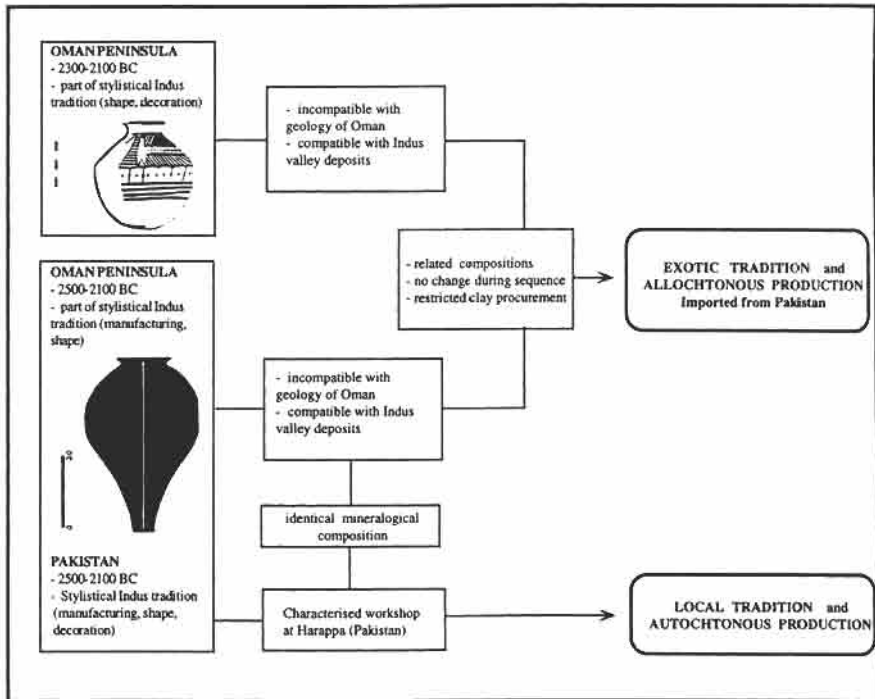


Fig. 7 - Reconstruction of the origin of two Harappan types of vessels: black-slipped jars and bottles.

excavating in this part of the world is well aware of the many uses of teneke (tin-cans) of ca. 20 l. which originally came as containers for imported food (and specially Indian ghee). Of course, no type of re-use can be excluded, but the number and distribution of jars suggest at least a preferential use in relation with the exchange system that channelled food products across the Peninsula, like fish from the coast or dates from the interior. During a visit to Quriyat in 1992, S. Cleuziou and M. Tosi were able to watch fishermen filleting fish on the beach, salting them and packing the pieces into Indian ghee tin-cans. A re-use pattern could also explain the massive presence of black-slipped jars at Asimah, a small valley ca. 20 km off the coastal settlement of Bidiya, where they could have been associated to any kind of specialized production.

Other types of Harappan domestic vessels were found in Omani settlements (Table 5), including pedestalled dishes with "fingernail impressions" (Fig. 5e, f), perforated vessels (Fig. 5g), bowls (Fig. 5h) and

TABLE 5

Recorded occurrences of Harappan types of vessels in Omani settlements.

Type	Parallels in Pakistan	Presence in Oman
BOWL (carinated shoulder, bilateral projecting rim)	- Marshall Type V (1931 :306-307) - Mackay (1938 : 203) - Dales & Kenoyer (1986: 169-177) - Quivron (1994 : fig. 54.6.r)	- Ra's al-Hadd HD-1 : HD-1.460 - Umm an-Nar settlement (Frifelt 1995 : fig. 225)
PEDESTALLED DISH	- Marshall Type A group b (1931 : 294) - Mackay (1938 : 190-191) - Dales & Kenoyer (1986 : 215-217, variety 2A) - Quivron (1994 : fig. 54.5.t)	- Hili : H8/915 UF67, H8/1944 UF 421, H8/2547 UF915 - Bat (pers. comm. K. Frifelt to Méry 1991a : 261) - Maysar -1 (Weisgerber 1984: fig. 24.3) - Umm an-Nar settlement (Frifelt 1995 : fig. 224) - Shimal (Vogt 1996 : 120).
PERFORATED VESSEL	- Marshall Type AF (1931 : 313) - Mackay (1938 : 207-208) - Dales & Kenoyer (1986 : 107-109) - Quivron (1994 : fig. 54.4.n)	Ra's al-Jinz RJ-2 & 3 : RJ2-734, RJ2-777, RJ2-834, RJ3-1
POT (small, restricted)	- Mackay (1938 : 209-210) - Dales & Kenoyer (1986 : 120-125)	Ra's al-Hadd HD-1 : HD-1.30
"COOKING" POT (round bottomed, single shoulder ledge)	- Marshall Type F (1931 : 300-301) - Mackay (1938 : 194) - Dales & Kenoyer (1986 : 132-137) - Quivron (1994 : fig. 54.4.e)	Ra's al-Hadd HD-1 : HD-1.337
JAR (tall, round bottomed, decorated)	Dales & Kenoyer (1986 : 74-77)	- Ra's al-Jinz RJ-2 : RJ2-216 - Ra's al-Hadd HD-1 : HD-1.521

large jars (Fig. 5j). According to their production sequence, all these vessels are distinctive of Harappan pottery techniques, and most of them are made of the micaceous ware that characterizes black-slipped jars. This association is very significant. At Nausharo for instance, micaceous ware is mainly associated with black-slipped jars which were probably not produced locally. We may therefore conclude that all types of Harappan vessels found in Oman came from the same production sites as black-slipped jars. If one refers to the 75 categories, mainly open vessels, defined by Dales & Kenoyer for Mohenjo-Daro, imported Harappan vessels discovered in Oman only reflect a fraction of the Harappan assemblage. But this is a rather homogeneous group, mainly composed of vessels which are usually

associated with preparation and consumption of food. Two types are significant in this respect. In his functional interpretation of Harappan pottery in relation to dairy products and according to ethnographical analogies, Gouin suggests that perforated vessels are cheese-drainers, and pedestalled dishes are graters used for the consumption of dry cheese. Both types were imported into Oman but were also copied in local fabric: a sherd from a perforated vessel was found at Hili 8 in phase II_d, and sherds from pedestalled dishes occur at Hili 8 (phases II_e and III), Maysar 1⁷⁸ and Bat.

Other types of Harappan vessels are associated to late Umm an-Nar graves (Fig. 6c-e). Most of them are small bottles with a complex naturalistic and/or geometric black-painted decoration⁷⁹. A few other small vessels, mostly with protruding base, were found in association with these bottles in tomb A at Hili north. One of them has a series of black painted horizontal lines on the shoulder (Fig. 6a, b), a classical Harappan decoration⁸⁰. According to mineral and chemical analyses, these Harappan vessels are not copies made by Umm an-Nar potters, who were perfectly able to manufacture such vases if they wanted to. Generally speaking, copied foreign wares deposited in graves are quite rare⁸¹, and this could be an indication of the high value given to such imported products in Oman in late Umm an-Nar times.

Other Indus finds include items produced by Harappan workshops, like beads and other objects usually related with administration (seals, weights). The first category includes an ivory comb similar to Indian models from Mohenjo Daro⁸² and Chanhu Daro⁸³, which was discovered in building I of period II at Ra's al-Jinz RJ-2. Etched carnelian beads were recorded in tombs A⁸⁴ and B at Hili North, and tomb B in Ajman⁸⁵. Besides these objects of indisputed Indus origin, carnelian is widespread in 3rd millennium Omani tombs but the origin of the raw material and/or the place of manufacture needs further investigations⁸⁶. Many other types of

⁷⁸ WEISGERBER 1984, Fig. 24.3.

⁷⁹ FRIFELT 1975, p. 368 from Hili 1059; AL-TIKRITI 1981, Pl. 73, 76, 91 from Hili tomb B; AL-HADDU 1989, Fig. 4.5, from Hili tomb N; AL-TIKRITI 1989b, Pl. 42a, from Ajman.

⁸⁰ DALES & KENOYER 1986, Fig. 102 n° 11-12.

⁸¹ MÉRY 1991b, p. 66.

⁸² MACKAY 1938, p. 542 and Pl. XCI n° 26.

⁸³ MACKAY 1943, Pl. LXXXIX n° 12.

⁸⁴ CLEUZIQU & VOGT 1985, Fig. 5 n° 1, 2.

⁸⁵ AL-TIKRITI 1989a, Pl. 46 T, U, 58 B.

⁸⁶ Although carnelian is generally reputed to originate from the region of Cambay, some minor sources are reported from the Arabian peninsula and the Iranian coast, near Bushir.

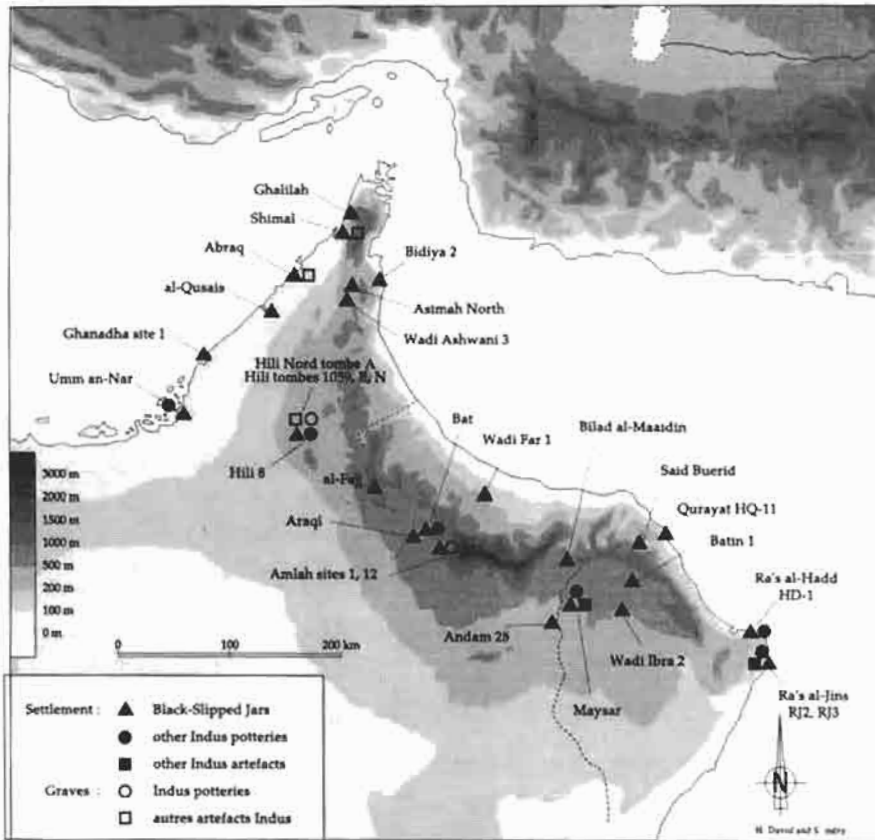


Fig. 8 - Distribution of imported Harappan artefacts across Oman.

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⁸⁸ AL-TIKRITI 1989b, Pl. 46 W.

⁸⁹ AL-TIKRITI 1989b, Pl. 46 D, Zb, Pl. 56c.

⁹⁰ CLEUZIQU & TOSI 1990, Fig. 19 n° 4.

sided clay “amulets”⁹¹. A similar object from grave 1 at al-Hajjar, Bahrain, displays a typical Indus bull on one side and three signs of Indus script on another side. According to their context, both are tentatively dated to the end of the 3rd millennium. A square copper stamp-seal⁹² displaying a typically Harappan pattern of a unicorn (or bull) in front of a stand below three (?) signs of Indus script, was discovered at Ra’s al-Jinz. An almost identical silver object was found at Mohenjo-Daro⁹³ and another one, also with an unicorn (?), at Lothal⁹⁴. The seal at Ra’s al-Jinz came from a period II context from building I, and can be dated to 2450-2300 BC. Two stone weights from a late *Umm an-Nar* context at Tell Abraq were dated by radiocarbon to 2170-2140 BC⁹⁵. The sophisticated flaking technology which was needed to produce them was certainly not available in Oman. They were associated with Indus potsherds from a large jar. Finally, rimsherds of jars with engraved signs occur at Maysar I, Tell Abraq and Ra’s al-Jinz RJ-2⁹⁶. They all seem to be made of local ware. The commonest type is a small jar with widely everted rim, but other rim-shapes occur as well, and so far we do not know whether this is a significant fact. Whether the engraved signs are Harappan, Harappan-like or not Harappan at all is another question, and a difficult one to deal with.

NEW INTEGRATIONS: THE WĀDĪ SŪQ PERIOD

Oman experienced a deep transformation in the course of the 21st century BC, which brought an abrupt end to almost one millennium of slow evolution in material culture and social structure. Attempts to establish the existence of transitional material, by enhancing the presence of some items or by excavating a transitional level have failed or are hardly consistent. This transformation affected the whole Peninsula, resulting in a uniform material culture from Shimal in the north to distant Masirah Island in the south, but the changes were probably too swift to be picked up by our chronological indicators. Many characteristic aspects of

⁹¹ WEISGERBER 1984, Fig. 24.7.

⁹² CLEUZIOW & TOSI 1990, Fig. 18.

⁹³ MACKAY 1938, Pl. XC n° 1.

⁹⁴ RAO 1973, 94 and Fig. 21 n° 12.

⁹⁵ POTTS 1993a: Pl.1 & p. 427.

⁹⁶ WEISGERBER 1984, Fig. 24.5; POTTS 1990b, p. 41 and Fig. 37; CLEUZIOW & TOSI 1990, Fig. 20 n° 3.

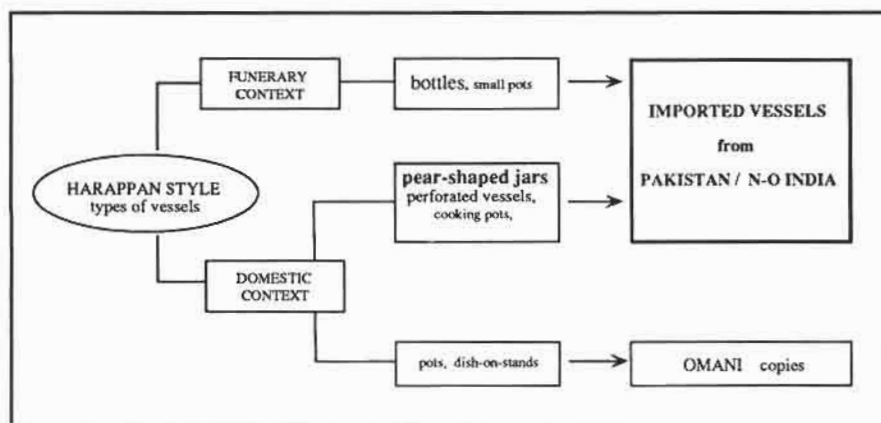


Fig. 9 - Relation between finding context, morpho-functional category and probable area of manufacture: Harappan types of vessels in Oman between 2500 and 2000 BC.

Umm an-Nar culture continued, like collective burials underneath megalithic monuments, re-used stone towers, or economic activities like copper exploitation and the manufacturing of soft-stone vases. But the architecture of these burials was different, and the typology of copper items or soft-stone vases changed.

The evolution of local pottery is significant of the change that occurred. Shapes and decorative patterns are entirely renewed and do not display obvious links with neighbouring or distant countries (although some similarities can be traced with the poorly known Kaftari ware of southern Iran). Already, new types of vessels appear from the earlier phases of the *Wādī Sūq* period: large storage jars, cooking pots, bottles, spouted vessels, etc. Together with this diversification of functional categories of domestic pottery, some settlements yield a significantly higher amount of pottery than before, especially Shimal. Manufacturing techniques also differ completely. Coiling is now used for making large storage jars, and potters leave a conspicuous trace of string-cutting at the base of the vessel, or they scrap the bottom part of wheeled beakers and pots after partial drying. The composition of fabrics is also very different. This indicates a change in raw material sources and in some cases, perhaps, a change in the location of workshops. It also indicates a change in manufacturing ways (low standardization of fabrics, use of various tempers like coarse sand, crushed shells, vegetal, etc.). Whereas only funerary wares displayed unity in the Umm an-Nar period, because they

were produced in a few restricted centres, the shape and decoration of both domestic and funerary Wādī Sūq wares is strikingly standardized all over the Peninsula. There is, however, a diversity of wares indicating a much more widespread production, and therefore new patterns of distribution and consumption. To some extent, the transformations in the Wādī Sūq material culture can be characterized by a recombination of existing features which are given a different status, with new ones which were possibly known before but never used.

However, we are reluctant to consider that the newly incorporated technical features of the Wādī Sūq pottery assemblage were borrowed from imported vessels, especially from Harappan vessels. These no longer occurred in Oman, and, moreover, Umm an-Nar potters had never made use of these techniques when Harappan pottery was available.

The possibility of black-slipped jars being shipped to Oman in Wādī Sūq times can be ruled out because they are no longer found in Wādī Sūq contexts, and because these vessels were no longer produced in the Indus. Moreover, other categories of previously described Harappan material do not occur any longer. The only exception is a cubic weight found in tomb 6 at Shimal, but its occurrence in a funerary context leads us to consider it as a curio devoid of any functional value, which cannot be used to establish any chronological link. The same collective burial contained a globular necked jar of red ware with a series of painted horizontal lines on the shoulder, for which parallels are known in Gujarat – Lothal A, Rangpur IIA⁹⁷ – but none are from Harappan contexts. This means that contacts with the Indian-Pakistan world were not broken, at least with the coastal regions. At al-Abraq, an everted rim from an orange jar with black-painted horizontal bands of early 2nd millennium was discovered⁹⁸. An orange jar with black-painted lines and an engraved sign on the shoulder from Ra's al Jinz RJ-1⁹⁹ could belong to this group as well.

On the western coast, both second and first-level imports from the west occur: at al-Abraq there are 298 well-identified sherds of Dilmun red ridged ware as well as sherds originating or imitated from Old-Babylonian and Kassite Mesopotamia or Elam¹⁰⁰. A few pieces are also known from Shimal. Their occurrence comes in illustration of a Gulf network which was very active according to Old-Babylonian texts, and which probably

⁹⁷ DE CARDI 1989, p. 12 and Fig. 2.

⁹⁸ POTTS 1990b, p. 61 and Fig. 73.

⁹⁹ BIAGI 1990, Fig. 4 n° 1, 5, 7.

¹⁰⁰ POTTS 1993a, p. 429-33.

never ceased in later periods, as emphasized by Potts in the same paper. This is strengthened by the presence of various Omani-type copper items and soft-stone vessels in the Gulf, in southern Mesopotamia and Elam¹⁰¹. However, the homogeneity of Wādī Sūq material culture reflects such strong cultural identity that we find it difficult to follow him when he considers this material as “a measure of acculturation which had never been observed”. The status of these objects is not different from that of imported vessels in earlier periods.

TO CONCLUDE: FROM OBJECTS TO HISTORY

The preceding lines submit a selection of scenarios¹⁰² which can be reconstructed around the occurrence of several foreign items in the Oman Peninsula. In each case we have sought to understand how these items became integrated into the local material culture. We were careful not to shift at once from occurrence to interpretations of historical character. Our conclusion is an endeavour at including these patterns into a more general historical trend.

The occurrence of Ubaid sherds at almost every coastal settlement is a good indicator of the importance of exchange networks in the Gulf since the sixth millennium BC. Tosi demonstrates how coastal communities monitored these networks to obtain any kind of goods, including materials of key importance for daily life¹⁰³. This was recently strengthened by McClure who found evidence for the use of Mesopotamian bitumen to coat the hull of reed-boats in the late Ubaid period at Aīn as-Sayh near Dhahran¹⁰⁴. There is no reason to agree that all this network was operated by “Ubaidians” of southern Mesopotamia, nor to think that one day these people “headed to the Strait of Hormuz”, after Haerinck’s suggestive title¹⁰⁵. Other networks were probably active along the coasts of the Sea of Oman, as well as the Arabian coast and across what was not yet the Rub’ al-Khali, until southern Arabia. Allogeneous elements were channelled through these networks, which are found included in the incipient productive stage of the Oman Peninsula in the 4th millennium BC: plants

¹⁰¹ CLEUZIQU 1986; POTTS 1993a, p. 432-33.

¹⁰² In the sense given to this word by GALLAY 1986, p. 17.

¹⁰³ TOSI 1986b.

¹⁰⁴ MCCLURE & AL-SHAikh 1993, p. 114-18.

¹⁰⁵ HAERINCK 1991.

and animals and also, towards the end of this long prelude, craft activities like pottery and extractive metallurgy, the latter obviously originating from south-eastern Iran.

Uruk archaic texts repeatedly mention "Dilmun" copper to describe a metal that certainly came from elsewhere. The few available archaeometrical analyses were made on objects from Susa and they show that *Oman was already providing copper massively to southern Greater Mesopotamia*¹⁰⁶. Oman seems to have been unknown to the early bureaucracy of Mesopotamian urban societies, but the archaeological configuration very clearly demonstrates the local effects of their demand for copper and other raw materials. This was linked to major changes, leading to the rapid formation of agricultural oases and the development of new hierarchies embedded in the previously kinship-based society. "Magan" had been in existence as a society for at least half a millennium before it eventually appeared as a country in cuneiform records, and the shaping of this society includes elements of this distant interaction with early Mesopotamian states.

In addition to an inventory of Magan products, these sources also list products used for payment. It is generally agreed that textiles and wool came first. The fact that they are explicitly mentioned as gifts in ED III texts related to Dilmun trade is not significant of their status in Oman itself, nor is the fact cited by Potts¹⁰⁷ from Waetzold, and now repeatedly quoted, that most of these were of low quality. Does this mean that this low-quality merchandise was good enough for the elites of a "third-world" land (another version of the glass-bead trade), or simply that rather large amounts were involved in the exchange? The status of barley has also been discussed recently. Did large quantities of grain enter the Gulf, and where to? Edens does not hesitate to consider that Mesopotamian barley played a major part in the development of urbanization in Dilmun/Bahrain¹⁰⁸, albeit more restricted in the coastal areas of western Oman. During-Caspers considers grain imports as a necessary complement to "support the large number of workmen and artisans engaged in the copper mining industry"¹⁰⁹. Their arguments are abruptly dismissed by Potts for several reasons. As far as texts are concerned, text ITT 2.776 from Lagash

¹⁰⁶ BERTHOUD 1979, p. 117.

¹⁰⁷ POTTS 1990a, p. 186.

¹⁰⁸ EDENS 1992, p. 128-29.

¹⁰⁹ DURING-CASPERS 1989, p. 14.

mentions barley as cargo for Magan but does not explicitly state that it is for the payment of copper, and a few years later barley is absent from the goods issued by the temple of Nanna “for the purchase of Magan copper” to Lu-enlilla, a merchant of Ur engaged in Gulf trade¹¹⁰. One should also consider the existence of oasis agriculture in interior Oman, and the alleged fact that according to dental wear, cereals played no part in the diet of coastal populations.

This restrictive interpretation of texts and over-confident use of bio-archaeological data is opposed to During-Caspers who somewhat naively considers copper exploitation in Oman on the model of modern oil exploitation, including the need to import everything that a country cannot supply. Such views are not tenable, but we find Potts’ argument excessive as well. Leaving aside the question of Dilmun, we see no reason why significant amounts of wheat or barley should not have reached Magan. Of course one has to be careful in accepting arguments which are not grounded on “objective” archaeological facts or safely engraved in clay, but this restrictive position is in itself an undemonstrated postulate. According to it, trade in food products would have been either non-existent in the 3rd millennium BC, or remained marginal, like that of sesame oil, which is accepted by the same author¹¹¹. Classical ideas about the importance of luxury goods in Early Bronze Age are partly grounded on the assumption that in those times exchange with distant areas was intermittent and difficult, and therefore concerned goods of high value and small weight. In other words, the reliability of exchange for the supply of first necessity products is dismissed.

This postulate needs to be questioned. The part played by food products in the exchange system between the Indus valley and Oman seems to have been an important one. Gouin has convincingly demonstrated that dairy products were traded, and black-slipped jars were very probably used to transport food, like later classical amphorae. From what is known about networks in the Peninsula itself, we can also infer that such products found their way into the interior. From its first mention in the *Periplus*, fat was always among the main imports to Arabia. The generalized use of an imported material like bitumen in navigation techniques also conveys some information about the reliability of the

¹¹⁰ POTTS 1993a, p. 425.

¹¹¹ Even in this case, 6 kur (equated to 1515.6 litres by POTTS) are certainly not a small quantity.

networks in channelling products on a fairly large scale. Cuneiform sources, although they do not mention explicitly that barley was sent to Magan in exchange for copper, at least suggest that an exchange ratio between copper and barley existed from the time of the Farah texts, and that cereal production in Mesopotamia was so high that some of it could be exchanged if necessary. The boats used in Gulf trade were large enough to carry significant amounts of cargo including cereals. We think that both DURING-CASPERS and POTTS are too systematic in their argumentation. Coastal populations obviously relied heavily on sea products, whereas the inhabitants of Hili lost *ca.* 90% of their molars through their dependence on palm-dates¹¹². In both cases cereals only played a secondary part and could certainly not be the reason for such dental-wear¹¹³.

In the 3rd millennium BC, imported grains or any other kind of imports must have been welcome to Omani society, whatever the local production. Imported goods were probably of a different nature, and their possession and storage would have bestowed prestige to whoever kept them and had the power to release (or share) them when it became necessary to prevent food shortages, an important requirement of all social relations in this area.

The scarcity of Mesopotamian objects after 2700 BC in interior Oman is not in itself a measure of the exchange network activity and this argument should be dismissed as well. The dichotomy traced by Edens between the coast and the interior is unnecessary and artificial. Internal and long-distance networks were completely tied up in 3rd millennium Oman, and the key-factor was copper which was controlled by communities of the interior. The fact that many items related to long-distance trade occur in coastal sites illustrates the importance of trade for those sites, nevertheless it does not indicate that they monitored the trade. Examples from Ra's al-Jinz and the Ja'lan show that a commodity like shell-rings of *Conus* and *Pinctada* were produced for use in Oman, rather than for export¹¹⁴. Even a resource for coastal communities like trade in salted fish may in fact have been heavily dependent on salt-supply from Qarat al-Kibrit or Qarat al-Milh, deep in the interior of the land. This was still the case a few years ago¹¹⁵ and it is unlikely that any other form of

¹¹² MACHIARELLI 1985.

¹¹³ Contrary to what POTTS seems to believe, the Wadi Jizzi burial is not a coastal site near Sohar, it was discovered *ca.* 50 km inland (FRIFELT 1975, p. 374).

¹¹⁴ CHARPENTIER 1994 and this volume.

¹¹⁵ COSTA 1988, p. 6.

salt-processing was known in prehistoric Arabia. In other words, success in the political and social competition linked to exchange implied circulation of more goods, and more particularly of exotic goods with an additional symbolic value, rather than retention of goods. Considering the strength of the oasis areas of the interior, it is doubtful that coastal areas could have nucleated as independent polities and would have been able to control the network for their own benefit. Beyond some aspects linked to environmental conditions, known settlements on the coast and in the interior display a very high homogeneity in material culture, suggesting that social and political boundaries in Bronze Age Oman were not grounded on such a dichotomy. Social studies of traditional Omani society are a good illustration of the same situation¹¹⁶.

This insight of internal political relations leads us to the last question: how did Mesopotamians and Harappans interact with populations of the Oman Peninsula, and how did the two Great Powers meet or compete in the area? This question needs to be discussed, but it cannot be solved on currently available data. However, a few points can be stressed.

The “colonial” model seems irrelevant. We have already mentioned that it cannot be applied to contacts with Mesopotamia, and attempts to advocate it for relations with the Harappan area seem bound to fail as well. Our understanding of Harappan investment in distant countries relies on the fortified outposts of Sotka Koh and Sutkagen Dor which control the passes between coastal and inner Makran, or the Harappan settlement at Shortugai in Afghan Bactria.

However, Shortugai, Sotka Koh and Sutkagen Dor¹¹⁷ have yielded a material assemblage matching exactly that of Indus valley settlements, whereas in the Oman peninsula, where such outposts have not been discovered, we only have some categories of Indus material.

This is specifically the case for a site like al-Abraq, where almost all elements of material culture are of clear Omani affiliation. Excavations at Ra’s al-Jinz (where a much larger amount of Harappan material was found) clearly demonstrate this situation.

We are therefore back to “the hypothetical picture of an Omani entity selectively trading with two different neighbours” advocated by Cleuziou & Tosi¹¹⁸. *In this case, we can expect that competition between the great*

¹¹⁶ LANCASTER & LANCASTER 1990.

¹¹⁷ BESEVAL & SANLAVILLE 1990, pp. 95, 100.

¹¹⁸ CLEUZIQU & TOSI 1989, p. 42.

powers was mainly mercantile, in order to obtain raw materials from the Oman Peninsula. Both Mesopotamia – either directly or through Dilmun merchants – and the Indus could have traded their products, invisible products quoted by cuneiform texts as well as others which are not listed, or even some finished products, in order to obtain copper or other raw materials. In this perspective there are many remaining questionable points. The possibility that Magan copper was the main traded commodity between Oman and the Indus remains undemonstrated, albeit generally accepted. More knowledge is needed about the modalities of this trade. Which areas of the Indus cultural complex were involved, and did they vary through time? Black-slipped jars were found at coastal sites in Makran, like Prahag A-C and Pasni 63 and 64¹¹⁹, and the part played by these communities should be properly assessed. It is likely that they were involved from a long time in the second-level exchange network between Baluchistan and Oman. Several authors have also considered the possibility that urbanized Gujerat may have played a major part in these relations. We cannot even say who operated this trade, and the presence of Harappan material is no indication that everything, including navigation, was in the hands of Indus people. If Magan boats were able to reach the piers of Akkad, they could have ventured to Meluhha as well. All this remains to be grounded on archaeological and analytical data. We do not have a single provenience analysis of Indus copper, and so far only one unpublished bun-shaped copper ingot from Ra's al-Hadd HD-1 can be tentatively related to this trade. Was the exploitation of Masirah copper mines, 250 km SW of Ra's al-Hadd, linked to the sole Indus area, or was it an answer to a general increase of demand? We have no evidence that the mining began before the outset of Wādī Sūq and therefore one should consider both possibilities.

The only historical fact associated to the land of Magan reports the destabilization of this market situation by the aggressive policy of Sargon's descendants. The campaigns of Manishtushu and Narām Sīn can be interpreted as an attempt to break the Indus valley's growing influence in the region, although this influence was certainly not new at the time. The Akkadian policy can more likely be explained by the ideology of the first "Universal empire", in which straight appropriation through warfare and control by the central power had to replace trade relations¹²⁰. This

¹¹⁹ BESEVAL & SANLAVILLE 1990, p. 92-94.

¹²⁰ GLASSNER 1986a, p. 24.

historical event has probably had a strong impact in eastern Iran and Oman, although no trace of it can be found in the archaeological record of Oman itself¹²¹. Whatever the chosen chronology, this period of possible political disruption coincided with the main development of 3rd millennium Omani society. One century at least, and possibly more, elapsed before the Wādī Sūq culture appeared, together with a complete transformation of society; there is no straight link which can be established between these events. The mention of an *ensi*, or governor of Magan during the reign of Amar Suen (2046-2038 BC) leads Potts to suggest that Oman, or at least part of it, may have been briefly a province of the Ur III empire¹²², more or less at the time when this transformation occurred. Here again, there is nothing in the archaeological record which could help decide whether this assumption is not simply an over-interpretation of isolated textual data.

This is a highly unsatisfactory picture, but it is nevertheless consistent with what we could call, after Braudel, the “Personality” of Arabia, and more specifically that of the Oman Peninsula. Arabia has consistently managed to keep control of its exportable resources against foreign imperialism throughout history, by taking advantage of its rough environmental conditions and the strong cohesion provided by its kinship-based social system. To some extent, Manishtushu and Narām Sīn are the precursors of Aelius Gallus in Yemen, and both failed to establish anything but, at best, a temporary control over the coveted goods. The occurrence of allogeneous items in the area should not be over-emphasized or misunderstood. These items are repeatedly quoted because they are extremely useful to archaeologists for establishing chronological relations – hence the over-emphasis – and because they seem more conspicuous when discovered among cultures where only a restricted amount of material items was used.

The inventory of objects from a 3rd millennium site in Arabia is usually very poor when compared to contemporaneous sites of Baluchistan

¹²¹ And in particular, tomb A at Hili North is certainly not a “mass grave for the slain opponents of Manishtushu”, contrary to POTTS’ suggestion (1990a, p. 135). This interpretation was suggested by a preliminary anthropological study which was not carried out in relation with the excavator, and which mistook classical crackings due to partial cremation in some bones, with traces of weapons.

¹²² POTTS 1990a, p. 144. However, according to GLASSNER 1996b, p. 157, the title *ensi*₂, best translated as “prince” was “a title which was commonly reserved for foreign kings”.

or Iran. The number of these foreign objects is also linked to the specific behaviour of a local society who endows them through time with various values (from utilitarian to symbolic), along the main concept which rules any successful adaptation to an ecological milieu in Arabia, namely exchange.

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