

EASTERN ARABIA
IN THE FIRST MILLENNIUM BC

Edited by
Alessandra Avanzini

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ALESSANDRA AVANZINI (ED.)
Eastern Arabia in the First Millennium BC
International Conference - Pisa, 12th - 13th May 2008
Palazzo alla Giornata - Lungarno Pacinotti, 43

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Eastern Arabia in the First Millennium BC

International Conference - Pisa, 12th - 13th May 2008
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Monday, May 12th 9:30

Welcome and opening speech:

Prof. L. Tomasi Tongiorgi
(Pro-Rector University of Pisa)

Dr. Said Al-Salmi
(Office of H.E. the Advisor to H.M. the Sultan for
Cultural Affairs, Muscat)

A. Avanzini
Introduction

J.-F. Salles
(CNRS, Lyon)
De Pétra au Golfe: interprétation des données

F.M. Fales
(University of Udine)
Southern Mesopotamia in the first millennium

P. Lombard
(CNRS, Lyon)
Bahrain in the first millennium

Monday, May 12th 15:00

P. Magee
(Bryn Mawr College, Philadelphia)
Iranian influences in the Gulf

J. Schreiber
(D.A.I., Bamberg)
Iron I period in Oman

C.S. Phillips
(UMR7041, Paris)
Iron Age III in South East Arabia

M. Mouton
(CNRS, Université de Nanterre, Paris)
*La période Pré-Islamique récente dans la péninsule
d'Oman: chronologie et peuplement*

Tuesday, May 13th 9:30

A. Benoist
(CNRS, Lyon)
*Authority and religion in Eastern Arabia during Iron
Age II and III: architecture and materials*

J. Cordoba
(Universidad Autonoma de Madrid)
Domestic architecture

J. Häser
(D.A.I., Amman)
*Oasis settlements in the Oman Peninsula and the
results of the surveys*

W. Yasin Al Tikriti
(Dep. Antiquities and Tourism, al-Ain)
*The impact of the Falaj System and the Iron Age
Culture of Eastern Arabia*

P. Yule
(University of Heidelberg)
*U.A.E. Archaeology (without Oman) in the late Pre-
Islamic Age*

Tuesday, May 13th 15:00

Open discussion with the participation of:

R. Boucharlat
(CNRS, Lyon)

A. Invernizzi
(University of Turin)

S. Mazzone
(University of Florence)

A. V. Sedov
(State museum of Oriental Art, Moscow)

INTRODUCTION

Eastern Arabia and the ancient South Arabian kingdoms at the beginning of the first millennium BC

Alessandra Avanzini

I had already been working in Sumhuram in Oman for some years when, in 2004, H.E. Abdulaziz Al-Rowas invited me to begin an excavation in Salut, a project which I was glad to accept¹.

Under the archaeological direction firstly of A.V. Sedov and then of C. Phillips it was clear that the most interesting historical period of Salut was the Iron Age, from the last centuries of the second millennium to the mid centuries of the first.

I have been studying the kingdoms of south western Arabia for many years, and finding myself working on a site in eastern Arabia that was contemporary with the formation of the ancient South Arabian (ASA) states led me to ponder on the relationship between the two areas of the peninsula.

The new scenario that emerged in the Near East at the beginning of the Iron Age encompassed not only the ASA kingdoms but also the Iron Age settlements in eastern Arabia.

The moment in history was the same, and many of the “new” historic conditions typical of the end of the second millennium and the beginning of the first in the

Near East and the eastern Mediterranean were similar.

The actual realities that develop from such historic premises are, however, a very different story.

The beginning of the Iron Age in south western Arabia coincided with the formation of the earliest kingdoms, and these were characterized by a marked ideology of “state” with monumental texts to cement this identity. The structure of the ASA state has clear parallels with the kingdoms of the Syro-Palestinian area of the first millennium. By contrast, though, the kingdoms of south Arabia were less at risk of being attacked in wars of conquest. No armies of Assyrians, of Persians, of Alexander, or of Romans ever went there. The distance, the desert and the ocean protected these kingdoms from its much stronger neighbours but they also contributed to isolating them somewhat from the major cultural movements and events taking place in the world close by. This does not mean that the kingdoms of South Arabia did not feel the effect of outside history. Their economy was based on trade so it would have been impossible for them not to have felt the repercussions of change, even merely the shifts in the very

¹ H.E. Abdulaziz Al-Rowas is the Adviser to H.M. the Sultan for Cultural Affairs. The collaboration provided by the Office he directs was crucially important for the University of Pisa’s work in Oman. My

sincerest thanks to him and to the team who works in Muscat and Salalah.

nature of their markets of reference and the peoples to whom they sold their merchandise. In the course of their long history, their trading partners changed and hence the destination and means of transport of their merchandise.

The political restructuring of eastern Arabia was a completely different matter, affected as it was by the Gulf crisis of the early first millennium and partly bypassed by the new international trade routes. Its villages of the Iron Age were populated by sedentary peoples who tilled the land and developed sophisticated irrigation systems but did not seem to have constituted a centralised state.

The cultural frontier between eastern and western Arabia, that Michael Macdonald hypothesised², is perfectly fitting and in line with the state of affairs.

One aspect that Macdonald rightly focused on is that the written documentation of East Arabia borrowed its system of writing from neighbouring cultures instead of developing its own attesting the spoken language of the region.

This is important in identifying certain aspects of how East Arabia was organised politically. Again, reference to ASA documentation is useful.

The impressive production of ASA epigraphy is undoubtedly connected to the constitution of the state³.

The production of epigraphy during the 1500 year span of ASA history was not uniform. This cannot be justified only by the chance of the archaeological discoveries.

Taking the Jawf region of Yemen as an example, there is a clear wealth of linguistically distinct, epigraphic documentation up until the end of the Minaean kingdom. But while the end of the kingdom did not mark the end of major settlements – big cities continued to exist, the walls of Baraqish did not fall and the Minaean tribe was still attested after Minaean rule ended – monumental epigraphic documentation written in

Minaic did come to an end.

Very rarely were ASA cities destroyed by enemy forces. On the contrary, they survived long through the centuries and the reason for their lack of epigraphic documentation for long periods may have been due to the shifts that occurred in their internal political power structures.

Such a scenario is basic to understanding the extent to which epigraphic documentation and the language itself were just as part of state ideology, its political and religious structure, as monumental inscriptions were fundamental to the identity of its members.

The settlements of eastern Arabia in the Iron Age evoke the idea of a complex society comprised of a sedentary population, which, however, did not seem to have coalesced into a centralised structure or state and therefore did not feel the need to seek legitimacy by adopting a common language or by writing monumental texts in a way that would cement the union of the various parts.

The trading links in the first half of the millennium between Yemen and eastern Arabia have also been overestimated in my view. There is evidence in both areas of an organised, well-documented connection from the end of the fourth Century BC. To the well known examples⁴ two Sabaic dedicatory texts made by people from eastern Arabia can be added. The inscriptions, one re-interpreted by N. Nebes⁵ and the other published in the CSAI-website, seem to mention king Seleucus⁶.

To assume, however, that there were stable trading links between the two areas in the first half of the millennium is purely hypothetical and based on factors, which are somewhat weak, namely the cuboid perfume burners of eastern Arabia and the three ASA letters on a jar from Muweilah.

Eastern Arabian perfume burners, from that of Ras al-Jinz⁷

² MACDONALD 2000, p. 38, fig. 4.

³ A number of recently published works on the Syro-Palestinian area look at the relationship between monumental epigraphy and state. ROUDLEDGE 2004, pp. 27-40; ROLLSTON 2006.

⁴ MAGEE 1999, pp. 47-48.

⁵ I refer here to the Ry 547 inscription, a dedication in the temple of Mahram Bilqis. N. Nebes presented the missing part of the inscription: DAI-Marib 2007-I in the Seminar for Arabian Studies held in 2007 in London and translated *s'nt tntn S'lk mlk*² in the first line of Ry 547 as “the second year of Seleucus, the king” (*mlk*² with the Aramaic determination). Nebes identified Seleucus with Seleucus I (358-281 BC).

⁶ In an inscription in the university museum of Sana: A-20-216 ([http://](http://csai.humnet.unipi.it)

csai.humnet.unipi.it *The inscriptions in the Yemeni museums*), which is rich in Aramaic and north Arabian onomastic and grammatical traits, the line 5 reads: *b-s'nt s'bc S'lk mlk* “in the seventh year of Seleucus, the king” (PRIOLETTA, *forthcoming*).

⁷ CLEUZIQU, TOSI 1997. Two seals decorated with geometric designs were discovered in Tosi and Cleuziou's excavations (CLEUZIQU *et al.* 1994). These are reminiscent of ASA letters and create an evocative and meaningful link between the two areas. The history of alphabetic writing is also to be re-assessed from a southern perspective but great caution is called for before drawing conclusions. In order for a circle and a rectangle carved on a seal to become two consonants and not just two geometric shapes they need to be set within some cultural context which so far is wholly evanescent.

in the Early Bronze Age onwards, are taken as evidence of a trade in frankincense between the two areas of Arabia. Cuboid perfume burners are not only attested in Yemen but in the Middle East and southern Mesopotamia too⁸.

No analysis confirms that the perfume was indeed frankincense instead of just one of the many other perfumed resins which were also burned in the cube-shaped perfume burners of south-western Arabia.

So far they are not firm proof of trade in frankincense – probable perhaps – and how, if at all the elite of eastern Arabia was involved still has to be proved⁹.

It may be that cube-shaped incense burners of the beginning of the millennium could mean (highly probable) contact with southern Mesopotamia more than an ongoing link with the ASA kingdoms.

The inscription from Muwailah¹⁰ is too isolated an example to be proof of a structured framework of contacts between the ASA kingdoms and eastern Arabia.

These inscriptions are part of a scanty but significant group of evidence on the ASA presence north of the peninsula in the Syro-Palestinian area and in Mesopotamia in the early first millennium¹¹.

The hypothesis¹² that these data are proof of ASA peoples living on the border of Mesopotamia before continuing on down to Yemen is today devoid of any basis. These data are only evidence of the most ancient links between distant regions, the broadening of the scenario of the Near East at the beginning of the millennium¹³.

The letters on the jar of Muweilah, together with inscriptions on the seals found in Mesopotamia, could be part of so called “Oasis North Arabian” inscriptions¹⁴.

Therefore, at the beginning of the first millennium, eastern Arabia and Yemen had different social organizations with occasional contact between them.

The nomads are crucial for understanding the dynamics of history in the peninsula but they should not, as sometimes happens, become the only factor for examining the characteristics of Arabia in the Iron Age.

This may be the reason for my dislike of the generic but highly loaded term “Arabs”, with its marked Islamic connotation linked to specific social organizations, to define the inhabitants of the ASA kingdoms or of the villages of eastern Arabia in the first millennium BC.

Nomads awaiting the Prophet (who with remarkable political far-sightedness united dispersed tribes behind the faith of a single God) were pressing on the southern and northern borders of the Arabian peninsula. They gradually moved in to where the sedentary settlements were located to create the well-known dimorphic near-eastern society, forging links between distant cultures, without, however, imposing their own unique social organisation or their linguistic traits on the sedentary population¹⁵.

It is a known fact that by contrast to earlier periods, the structure of states at the beginning of the Iron Age was based ideologically on a “nomadic” lifestyle. Blood ties were crucial for defining a community, and alliances between groups were fundamental to the formation of the state. This however does not imply that this ideological premise affected the history of states overall in the Iron Age or that it is to be deemed the principal if not the sole aspect of their social organisation.

For example, the way ASA cities were planned naturally reflects the structure of their society which was

⁸ See, the incense burners from Lachish (SHEA 1983).

⁹ See the extreme conclusions in Magee 2005, p. 112: “Highly-decorated incense burners that are locally produced are also found in columned buildings at Muweilah, Rumlailah and Bina Bint-Saud. The use of these reflect the ability of elites to control overland trade-routes to Yemen, and therefore access to incense, and would have formed an important part of banqueting and élite gatherings”.

¹⁰ MAGEE 1999; MÜLLER 1999.

¹¹ To the well known examples of the Queen of Sheba’s journey, the mention of two Sabaean kings in the Assyrian annals and the text from Suḥu can be added the lesser known but no less interesting ASA ibex statuette from Hama (SCIGLIUZZO 2003).

¹² GARBINI 1984.

¹³ Here we must not forget the oldest evidence of cultural contact between the Near East and western Arabia, namely the south Semitic alphabetical order in Ugarit and in Palestine despite the difficulty in interpreting it. Whatever meaning might be given to the presence of the south Semitic alphabetical order alongside the Ugaritic-Phoenician one – well known not only at the periphery of the cultural area

which adopted the cuneiform Ugaritic alphabet but also within the city that created this system of writing and the order of its alphabet – is firm proof of contact between two writing traditions. It does not incontrovertibly prove direct contact between Yemen and Ugarit – the two writing traditions could have developed within Ugarit itself or of intermediate cultural centres. The early dating of Tayma² and its links with Egypt could make its role as a bridge between the two traditions credible. Assuredly, archaeology in Yemen in recent years, with hypotheses for dating some of the main ASA cities in the second millennium does not rule out that there was writing at that time which was taught and memorised in a predefined order in writing schools in Yemen.

¹⁴ MACDONALD 2000, pp. 42-43; FALES, in this volume.

¹⁵ I am therefore fully in agreement with MASCITELLI 2006, p. 16 “In ogni caso, fino al VI secolo d.C. gli arabi restano ai margini della storia, sotto il profilo politico, sociale, culturale”. In Semitic philology the definition of Amorrites as nomads capable of imposing their linguistic innovation on the sedentary peoples is historically unlikely (RETSÓ 1989, pp. 202-203).

centred on the family. Within the city walls large mansions were inhabited by members of the same family, a fact which as such is not in my view so meaningful. Examples of this are found all throughout history in every civilisation. On the other hand, to take this city layout as an indication that city-dwellers were closely tied to their past in the Arabian desert and to disregard the imposing royal palaces to be found in these very cities – the symbol of centralised state power – risks completely distorting the overall historical perspective¹⁶.

But let us leave aside for now the ASA kingdoms and what I deem to be the pervasive and dangerous tendency to take the early first millennium history of Arabia as monolithic, and focus our attention on the seminar on eastern Arabia in the Iron Age.

The idea of holding this seminar arose in the course of a conversation with Michel Mouton in Paris and, subsequently, Carl Phillips also warmly supported it.

This is a meeting that I can see as being characterized by productive debate among scholars whose interest lies in this area, and which will lead to the historical and cultural definition of this period – an authentic seminar, in the tradition of the 1982 conference of Lyon.

Rémy Boucharlat and Jean-François Salles wrote in their avant-propos of the proceedings of the conference of Lyon “L’objectif était d’échanger des informations récentes, souvent inédites, en même temps que d’aborder les problèmes difficiles de chronologie comparative ou de datation absolue, de la terminologie, des disparités régionales ou au contraire des traits communs et de leur interprétation”¹⁷.

After more than twenty years this continues to be the main purpose of our seminar.

Knowledge of eastern Arabia in the Iron Age has undoubtedly improved thanks to new excavations and an overall reassessment of its history.

In recent years, P. Magee has suggested dividing pottery typologies by chronology; his studies undoubtedly mark a crucial stage but we need look no further than the recent heated Muscarella-Magee argument to see how the issue is still open to debate, especially at a time when the archaeology of eastern Arabia comes into contact with the cultural and chronological periodization of other areas of the Near East.

The objective of this seminar is to reach agreement not only on identifying a chronological division of the Iron Age culture in eastern Arabia but also an overall framework for it, as well as identifying the relationship of continuity or hiatus with the glorious Bronze Age period that preceded it and the protagonists of this period and the trade and cultural relationships between them.

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¹⁶ For instance for Shabwa: “The development of towns from such a distribution of separated plots, corresponding to different families or clans, is characteristic of desertic Arabia. The most recent study of

the urbanisation of Shabwa, capital of the Hadramawt in antiquity, confirms this pattern” (MOUTON 2009, pp. 185-186).

¹⁷ BOUCHARLAT, SALLES 1984, p. 8.

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EASTERN ARABIA AND NEIGHBOURING REGIONS
A BACKGROUND OF HISTORY AND CONTACTS

ARABIA IN THE FIRST MILLENNIUM BC THE NEAR EASTERN BACKGROUND

Stefania Mazzoni

General Framework

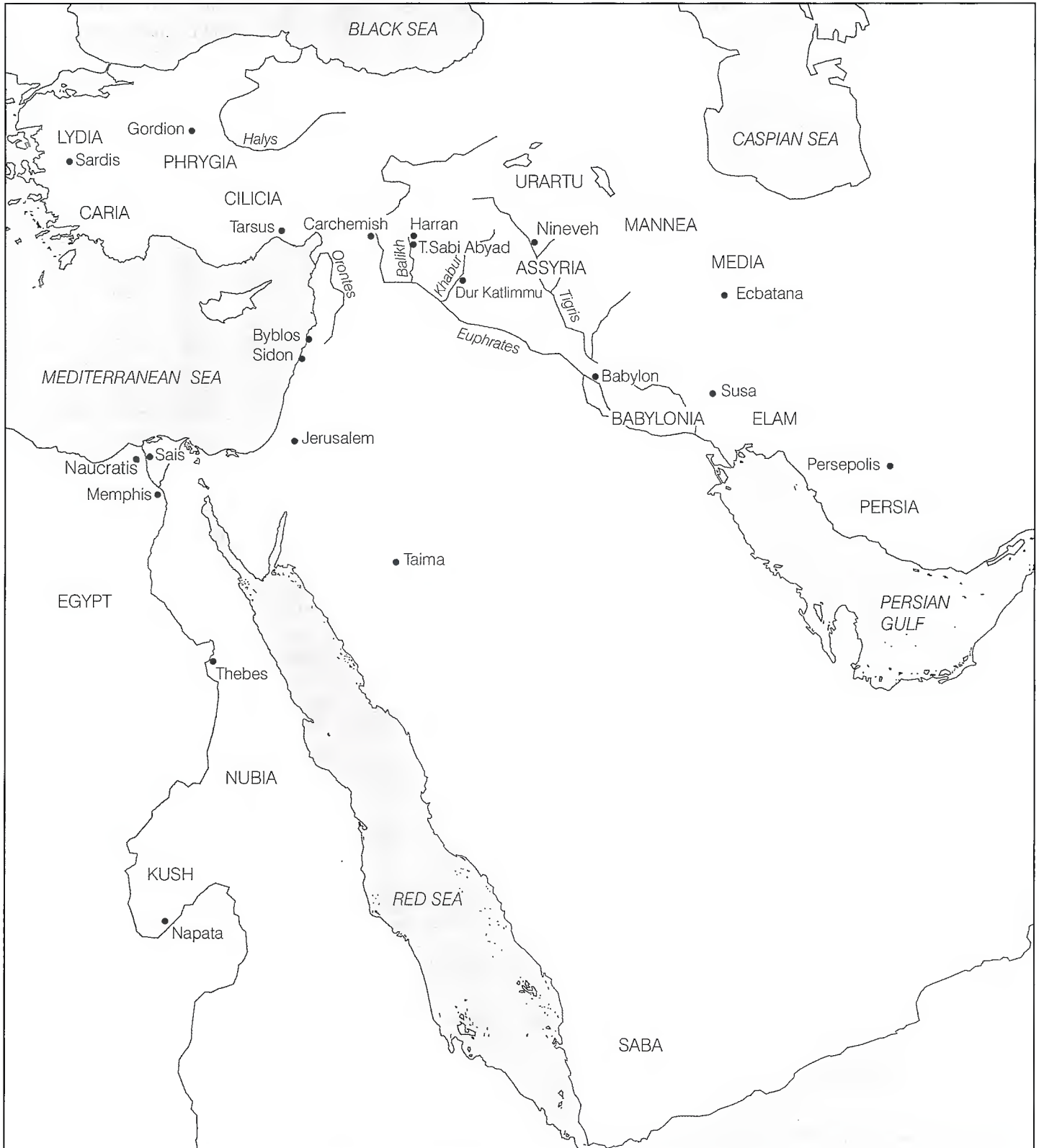
One of the more frequently discussed topics in the field of archaeological interpretation in recent years has been centred on the period of the transition from the Late Bronze to the Iron Age¹. In the Levant especially, this period experienced different trends, a quite widespread crisis of the political organisation which affected, more or less occasionally, the long-established network of settlements, and a subsequent renewal of the political and social scenario, also resulting in major cultural and economic changes. Among the favoured issues of debate on this theme has been the question of the degree of continuity *versus* innovation that was involved in the process: whether a new world or rather a renewed world emerged in the Iron Age could be viewed as a rather dull question and a mere play on words but it does, in fact, raise a crucial issue regarding the mechanisms that effectively bridged the long-lasting oriental society with its cultural and ideological traditions into an enlarged and variously populated Eastern Mediterranean. A further matter of debate has also been the interpretation of the relations and balance between regionalisms and gen-

eral trends; although it cannot be questioned that this delicate process of transition was a quite common and generalised Near Eastern affair, the impact and influence of distinct regional features in the scenario have cogently been argued. In this framework, understanding the interplay between indigenous and exogenous components, the former supposedly traditional and the latter innovative, has also been a topic of debate and discussion will undoubtedly develop along these lines.

However, archaeological and textual sources provide unquestionable documents on political events that brought important kingdoms and their capitals to an end in the first quarter of the 12th cent., and demonstrate that, after this period, new political conditions gradually emerged, with old and new kingdoms competing for their territorial boundaries. It is exactly in this phase, archaeologically termed Iron I, that consistent economic competition and social dynamics could develop on an unprecedented scale. More probably, and following a shared opinion, these trends had already begun in the course of the final Late Bronze Age and were accelerated and increased by the transforma-

¹ The crisis question has been the subject of several international conferences: DEGER JALKOTZY (ed.) 1980, WARD, SHARP JOUKOWSKI (eds.) 1992; GITIN, MAZAR, STERN (eds.) 1998; FISCHER, GENZ, JEAN, KÖROĞLU (eds.) 2003; VENTURI (ed.) 2009. Recent literature: KILLENBREW 2003. On Syria and the Levant see: VENTURI 2007, pp. 381-

426; on economy and trade in the transitional period: PEDRAZZI 2007, pp. 332-344. For Palestine there is a wide bibliography, summarised by PEDRAZZI 2007, pp. 27-30. More recently see GADOT 2008 for the coastal plain.



The New East in the first millennium BC (drawing by S. Martelli).

tion of the political scenario and the presence of a variety of patrons, customers and producers². This is certainly the case of some of the economic and technological developments that were probably embedded in the international landscape of the Late Bronze Age: the technology of iron for warfare and agriculture, architecture and monumental sculpture³, the technology and instruments related to an increased mobility by sea and land with ships for seafaring, saddles and harnesses for camel and horse riding and for chariots, but also developments related to the intensification and spread of occupation in different environments, in the oases and arid lands such as hydraulic technology for dams, canals and reservoirs and terrace building for agriculture⁴.

Social dynamics can be properly documented by literary and textual sources and did, in fact, exert a tremendous ideological and cultural influence. New components (Aramaeans and Phoenicians, Philistines, Chaldaeans and Hebrews, Ammonites and Moabites, Arabs and Iranians, Uartians, Phrygians, Medes and Ionians) appeared on the scene, facing and bringing pressure to bear on old empires such as Egypt, Assyria and Babylonia, and could gradually emerge to self-determination. This process not only changed the political geography of the area but also led to different mechanisms of cultural relations and interplay, of distinction, assimilation, attraction and emulation. In the same way, the over-seas and trans-desert circulation of goods and tradesmen, military occupation and imperial administration, deportation and forced relocation of populations were all factors that contributed to increasing, on the one hand, intercultural and symbiotic processes and prompting, on the other, manifold national identities and ethnic forces to develop as a reaction. It is here fitting to recall that two specific journeys, both ideologically significant, brought old and new identities into contact across far distant boundaries, the journey of the queen from Saba to Jerusalem and the journey of Nabonedo from Harran to Teima'. This process brings us directly to the core of the

present seminar, the position of Arabia with its distinct social and economic models. Arabia in the transitional phase is but a part, albeit far from secondary, of the same scenario. On the western flank of the desert, new components emerged to self-determination, probably stemming from Late Bronze local groups of herders, and settled the land taking possession of oases, streams and mountains and founding towns *ex novo*. On the eastern side the local population could also develop an oasis organisation and express social and economic distinct traits, which seem to be unrelated to either the western Arabian societies or the previous Late Bronze Age local societies. The once flourishing commercial coastal network of Eastern Arabia was not resumed on an international scale while, on the fringes of the desert, small clusters of villages and towns accommodated a population that depended entirely on the exploitation of local resources for internal consumption. Once more, it is in a wider Near Eastern context that these processes can be better focussed upon, not in a deterministic cause-response dimension but in a perspective of integration into an organic system embracing a common and extensive interacting area. They are in fact to be understood against the background of the climax of the transitional years. As already said, a consistent role in the transition from the Late Bronze to the Iron Age was the gradual shift from a concentric centripetal network system, based on palatine and élite production and consumption, and consequently self-sufficiency, to an enlarged centrifugal system. This included decentralised, competitive economic and commercial activities, their dissemination over-seas and the mutual circulation of foreign agents and traders at home and abroad, in a political scenario shared by a plurality of powers but largely dominated by supra-regional empires: Assyria, Babylonia, Egypt and Persia. These empires were, at one and the same time, political and ideological *foci*, cores of cultural attraction and geographical poles. Of undoubted relevance in this regard was the altered geography of the economic network, which mirrors the interplay between

² Following SHERRAT 1998, p. 101, an open economy brought on by the presence of new components on the coast and Cyprus was a further factor of destabilization for the centralised economies of the palaces. The Phoenicians, instead, were able to profit from this new decentralised economy: BAUER 1998, pp. 159-163.

³ On the importance of iron working for Syria, see MAZZONI 1981. On the economic and social role of iron: SHERRAT 1994, pp. 60-62; PICKLES, PELTENBURG 1998, pp. 88-90 underscore the "industrial devolution" after the crisis of the palace economy that promoted competitive crafts. Following DREWS 1993, pp. 192-208 Aegean weapons and es-

pecially the *cut-and-thrust*, Naue II swords had a dramatic impact on the crisis of the Levant stimulating a consistent change in warfare.

⁴ I have already dealt with the technological background of Iron I in MAZZONI 1981 and 1995. The emergence and nature of artificial terrace building with related practices of the control of rainwater runoff flowing from the hilly flanks are still debated: see HOPKINS 1985, pp. 175-179; BOROWSKI 1988 and the review of the literature by GIBSON 2001, pp. 116-128. According to STAGER 1982, pp. 115-116, there is mention of terraces for vineyards in the Ugarit texts. GIBSON 2001, pp. 118-119.

the many distant partners as well the area of concern and subsequent involvement of the imperial powers. Attention and interest have been more often addressed to the Mediterranean network with its expanding borders embracing western and eastern partners (Myceneans in the Late Bronze, Phoenicians in the Iron Age), and then preparing the context for the ambivalent east-west relations that still today undermine stability in the area. Other areas also became attractive and entered the network, such as western Arabia, once local societies were capable of mobilising and capitalising sufficient wealth to sustain economic and social growth and establish trade and formal relations with neighbouring areas. This was certainly beneficial to the Levantine circuit which could extend at both ends to include, in a common network, the Mediterranean and the Red Sea with south-west Arabia, thus increasing *de facto* its commercial potentialities. However, a further circuit of economic interaction also played a nodal role during this period, crossing the northern and north-eastern frontiers, which had long been alternately marginal or integrated into the orbit of the dominant powers, and were now instead potential *nuclei* of economic development. The attraction towards these northern frontiers became a vital factor that contributed to transforming the scenario of the Near East in the course of the 1st millennium BC.

This transformation, and especially the widening of the geographic sphere of economic and political interaction have, in fact, to be analysed from the perspective of a long duration and phasing is therefore central to our understanding. Two main phases can be singled which attest to different factors of development and substantial cross-cultural dynamics also related to the increasing role of technological innovations which, as noted earlier, helped to maximize and accelerate the process. The first phase corresponds to a period of great mobility and transformations, including different waves of social and ethnic assessments (12th-9th cent. BC), the second corresponds to the economic and cultural *floruit* of a politically redefined scenario dominated by empires and their opponents (8th-6th cent.).

Phase 1

We can recognise a first phase, embracing the end of the Late Bronze Age (13th-mid 12th cent.), the transi-

tional LB/Iron Age (12th cent.) and Iron Age I (end 12th-10th cent.), that is characterised by the disappearance, ascent, intrusion and interaction of different native and external forces and ethnic movements. On the one hand, following the fall of Khatti and many Syrian and Canaanite kingdoms and the ascent of Assyria, new dynamic *foci* such as the Sea Peoples and the Philistines intruded, entailing a steady Mediterranean perspective⁵; on the other, local components of native origin, such as the Aramaeans, Hebrews and Arabs could ascend, entailing a distinct societal organisation with tribes and a steppe and desert perspective, with a nomadic style of life⁶.

It is important to note that the transformation of the geography of competition for power and economic interplay was paralleled by an increased mobility and by a consistent development of the means of transport. Seafaring in the Mediterranean, from east to west, was rendered practicable by improving the efficiency of ships⁷, and, in the same way, the invention of the camel saddle improved camel riding on long distance journeys whilst horse riding would eventually accelerate mobility in war and rapid, long-distance communication over different landscapes. Increased mobility certainly had the effect of facilitating the movement of peoples and especially nomads over sea and desert.

It is well known that the introduction of large scale camel riding was apparently one of the factors that substantially expanded the network of the caravan routes, including Arabia and Arab tribes, but it was also instrumental in developing mobility and consequently also the threat posed by tribes in the north. The representation of scenes of camel riding in the decoration of the Herald's Wall at Karkemish, capital of Khatti on the Euphrates, and the "Small Orthostats" of the "Tempel Palast" of Guzana, capital of the Aramaean Bit Bakhiani on the Khabur, illustrate the economic importance of camel riding also in northern Syria from the 10th cent. BC⁸.

A further force to emerge with its social identity and distinct economic role was represented by mountain herders, also native components in the eastern frontier of the Zagros and Taurus ranges, up to the farthest Caucasus and Euro-Asiatic steppe. In fact, western Iran was also affected in the later second millennium BC by factors of instability and ethnic

⁵ Recent literature: HALPERN 2006-2007; KILLEBREW 2006-2007.

⁶ In the vast bibliography on nomads see the different approaches and themes in: EPH'AL 1984; STAUBLI 1991; CRIBB 1991.

⁷ ARTZY 1987, pp. 75-84 on the connection between a new type of boat and the Sea Peoples.

⁸ ORTHMANN 1971, Pls. 8e, 28c.

movements. The transition from the Middle to the Late Elamite period around 1000 documents a general crisis of urbanisation, with the Middle Elamite towns abandoned in Khuzistan, Susiana and Fars⁹. A certain degree of continuity characterised, instead, the Ram Hormuz plain, in the south-east, Luristan, in the north-west, where nomadic pastoralists are documented by their funerary practices and cemeteries, and in the Urmya plain, where a major break can also be linked to a new culture and new burial customs probably documenting a “shifting of population”¹⁰. Among these components a few would settle and also emerge to self-determination, constituting more or less stable political aggregations (Uruatri, Urartians, Manneans, Medes, Iranians)¹¹. Even though their origin and economic role are still little known, their connection with metallurgy, horse breeding and horse riding is undoubted, as seems to be the Assyrian interest in them since the very beginning of this nodal first phase.

The Assyrian political ascent in the 13th and 12th cent. BC constituted an important element of continuity and stability in a scenario undermined by successive economic (famine, drought) and social (tribal conflict) factors of instability and crisis, and dramatic political events. Assyrian interest and expansion towards the Upper Tigris and especially the Jezirah were not unrelated with all these factors, profiting as they did from the weakness of coeval powers at the borders. The administrative control of the Jezirah up to the western frontier of the river Balikh, with the outpost of Tell Sabi Abyad could, in fact, supply Assur with large quantities of crops¹². The foundation of the new provincial capital Dur Katlimmu (Tell Sheikh Hammad) was also destined to exploit the land for agriculture, a goal that was successfully achieved in the 9th-6th cent.¹³ Different data indicate, in the course of this period, a tendency to gravitate towards the northern plains and piedmont and eventually a gradual shift from the lowlands and alluvial plains of central and southern Mesopotamia. In economic terms, the expansion to the Jezirah is fully understandable and a traditional target of Assyrians since the time of Shamshi-Adad I, who founded his provincial capital at Shubat-Enlil

(Tell Leilan) in northern Khabur¹⁴. The transfer of the capital from Assur to Nimrud in the 9th cent. and the subsequent transfer to Dur Sharrukin and then Nineveh were certainly related to the exploitation of the rain-fed northern plain and especially the fertile area of Mosul, but also the frontier mountain areas with their resources. Copper, iron and silver were notably the primary resources of Assyrian trade from the *karum* period on and, through military conquest and annexation, metal objects and instruments made by specialised crafts became a consistent part of the tribute and booty listed in the Annals and shown in the wall reliefs in the Assyrian capitals.

Instruments for horse riding and chariotry were highly valued objects of tribute and booty. Among the many innovations characterising the period, horse riding must have played a far from significant role. Northern Mesopotamia and especially the Jezirah was a nuclear area for the breeding of equids from the 3rd millennium on, and chariots were the élite means of transport for war and social and cult occasions¹⁵. The texts of Ebla refer to onagers and Nagar (Tell Brak) was a centre of their breeding¹⁶, while many equids have been found buried in the funerary installations adjacent to the tombs of the mortuary complex at Tell Umm el-Marra in northern Syria¹⁷. It was again in the same area, and particularly in the Khurrian Mittani world, that chariot driving and horse training were developed with an efficient specialised technique¹⁸. Equid-riding had occasionally been practiced in Mesopotamia since the end of the 3rd millennium and over the course of 2nd millennium thanks to simple harnessing, but without horse-bits¹⁹. Horse riding was still very rare during the Late Bronze Age and we can cite a seal from the Middle Assyrian fort of Tell Sabi Abyad on the Balikh in northern Syria, reconstructed from several sealings on two envelopes, one inscribed with the name of Ili-padâ, grand vizier of the western province at the beginning of the 12th cent., that shows a horseman approaching the façade of a building, probably the same owner represented visiting Assur as a sign of loyalty²⁰. Horse-riding is here a status symbol, as in the case of a few images of gods riding

⁹ CARTER 1998-2001, p. 285; POTTS 1999, pp. 259-263.

¹⁰ Luristan: OVERLAET 2003, pp. 6-13; for the Urmia Plain: MUSCARELLA 1974, pp. 52-53, quoting Dyson; PECORELLA 1984, pp. 334-335.

¹¹ SALVINI 1967; SALVINI 1995, pp. 18-24.

¹² AKKERMANS 2006; WILKINSON 1998.

¹³ See KÜHNE 1991 and at footnote 23.

¹⁴ AKKERMANS, SCHWARTZ 2003, p. 311.

¹⁵ MAZZONI 2006, p. 324.

¹⁶ ARCHI 1998, pp. 1-15.

¹⁷ SCHWARTZ 2007, pp. 51-52.

¹⁸ VAN DER MIEROP 2004, pp. 116-117.

¹⁹ OWEN 1991, pp. 259-273; MOOREY 1970, pp. 43-44.

²⁰ WIGGERMANN 2006, pp. 92-99, fig. 142.

horses. Capacity in horseback riding led to an efficient system of transport thanks to the introduction between the 12th and 9th centuries of both the horse-bit and cheek-piece that permitted strict control of the animal. Horse-riding was mainly practiced in the northern areas where horse breeding was traditional due to environmental reasons and the metals required for harnesses were readily available. One of the main economic resources of the emergent Urartaeans and Mannaeans during the 9th century was, in fact, horse breeding along with the many instruments used in horse riding²¹. While horses from chariots were said to be *kusaya* (“from Kush” Nubia), cavalry horses were instead mainly *mesaya* “from Mesu” (in Iran, possibly Manneans)²². The 9th century attests to soldiers on horseback in pairs during battles (as in chariots: warrior and driver), while with Sargon II the warrior could manage ride his horse and fight alone, certainly thanks to new types of bits that would have given better braking power²³. We can date to this period the emergence of units of specialised cavalry; later a class of élite officers would appear, who not only possessed the horsemanship, but also owned the horses and could afford their breeding and their expensive harnessing. As S. Dalley has convincingly demonstrated, Assyrian sources document a revolution in equestrian tactics from the 9th to the 8th cent.; in the lists of captured chariotry and cavalry, mostly from Syria, there is in fact change from a ratio of 1:1 (chariotry/cavalry) to a ratio of 1:10. The defeat of Mutallum of Kummukh, for example, furnished Sargon with 150 chariotry and 1500 cavalry; the fact that only the captured cavalry and chariotry from Syrian kingdoms were incorporated into the royal army (*kišir šarrūti*), points to a presence there of professional equestrian units. Urartu also provided Assyrians with professional cavalry officers and Urartians acted as traders of Mannean horses to Assyria.

To conclude, horse riding, mastering the techniques of riding and harnessing were important factors in the economic development of north-eastern mountain tribes and a focus of attraction for Assyria. They had a tremendous impact on equestrian tactics in warfare, increasing the mobility of armies over variety of landscapes. The conquest of the north-eastern frontier thus became vital to Assyrian expansion.

Phase 2

The lengthy phase corresponding to Iron II-III (9th-7th cent.) and to the Neo-Assyrian and Neo-Babylonian imperial expansion and consequent administrative control of many bordering lands of Mesopotamia, was a period of contrasting dynamics. On the one hand, regionalisation was increased in the periphery of the empire with, on the other, a rise in administrative and military imperial control and practices such as deportation and relocation of the annexed population resulted in shaping a large koiné, and the rise of mechanisms of social assimilation and cultural emulation. However, they also prompted opposite reactions, emphasising national or ethnic distinctiveness. The often gigantic and monumental works of urbanisation in the new capitals of these empires could also mobilise and concentrate together a large mass of workers and specialised artisans, frequently deported from conquered lands. Further facets of this process were deculturation and forced acculturation to imperial culture, which was more effective under Assyrians. A further factor was also constituted by a wave of technological transfer, more probably a mutual mechanism, seeing as the specialised craftsmen were often foreigners coming from the annexed centres, most of which were renowned for the production of a variety of crafts (ivory, bronze working). The spread of the easy Aramaic script and, consequently, the adoption of Aramaic as a *lingua franca* in the Assyrian *milieu* also belong to this same process.

One of the main targets of the imperial administration in the many peripheries under its control was to increase agriculture, crops and olive oil production. Regional farming areas were exploited and developed on an unprecedented scale, stimulating intensive farming and the spread of farmstead and rural sites in the strategic producing areas. A documented model of the Assyrian patronage of local productive economies is offered by the case of Philistia, which prospered in the 7th cent. under the Assyrians, and especially the case of Ekron/Tell Miqne, that was transformed into the main regional centre for industrial olive oil production in the wake of Assyrian economic and commercial interests in the region²⁴. In the Jezirah it was a period of intensification of occupation and use of the land for agriculture; clusters of towns, hamlets and farms have been documented by the surveys along the Ba-

²¹ DALLEY 1985, p. 42 quoting the letter from Sargon’s 8th campaign against Urartu.

²² DALLEY 1985, p. 43.

²³ DALLEY 1985, pp. 36-37; DREWS 1993, pp. 163-167 stressed instead

the centrality of infantry over chariotry and cavalry in warfare as a nodal transformation in the course of the Iron Age.

²⁴ See GITIN 1997, 2004.

likh, the western Khabur, the wadi Ajij and the middle Khabur. Here, a network of canals along the river was newly planned and could sustain intensification of agriculture, demographic growth and an unprecedented spread of settlements, especially in the period between 750-600 BC when a ranked six-tier settlement hierarchy can be postulated²⁵.

Hydraulic techniques and an efficient system of canals were instrumental in improving productivity in the middle and low Khabur basin. I have already stressed the importance in the Near East and especially in arid lands of the spread of a variety of hydraulic supports and practices during the Iron Age which were to substantially improve agriculture, increase productivity and the stability of crops and horticulture²⁶. Marginal lands could benefit from the spread of the technology related to water supply and irrigation that enabled small groups of farmers to rely on their products on a subsistence level. Although research stresses the many early cases of hydraulic practices in the Levant since the Early and Middle Bronze Ages, it is in the mature Iron Age that different solutions were experimented and successfully practiced on a large scale throughout the Near East. Technological as well as cultural dissemination were active factors that eventually led many regional areas to select and create distinct solutions to be practiced in different environments. In the mountain area north of Mosul, a complex hydraulic network was created in the 7th cent. to bring water to Nimrud and Nineveh. This included the Negub tunnel on the northern bank of the Greater Zab river²⁷ consisting of many tunnels linking shafts and sluice gates to regulate the water flow; the Kisiri canal, the northern system canals with the Maltaï canal and its reliefs, the Khinnis canals with inscriptions and reliefs and a dam at Bavian and its aqueduct crossing a river over a high bridge built in stone with rough carving and acute arches at Jerwan, and the Mount Musri canals²⁸. They were masterpieces of engineering technology, a model for training Assyrian engineers and definitely a planned hydraulic system consisting of stone built dams diverting rivers, canals tapping springs and gul-

lies in a run-off collection system to support agriculture²⁹. It has been said that knowledge of the Judaeen underground water systems with their shafts and tunnels might have provided Assyrians with the technical know-how³⁰; but these systems were strictly connected with the south Levantine towns more often founded near perennial sources. Cases of adoption of a system of interconnected canals tapping water from a watercourse to sustain, with additional water, rain-fed agriculture in an arid environment are still speculative as is the case of the Iron II Deir 'Alla in the Zerqa triangle (Jordan Valley)³¹; in any case, these can be better understood against the background of the trend of increasing occupation in marginal lands in the wake of the Assyrian and Neo-Babylonian technological incentives to agriculture.

These trends continued under the Neo-Babylonian and Achaemenid rules that provided a further, significant impact on developing agriculture, regenerating the southern and eastern area, the alluvial south Mesopotamia plain, including Babylon and Susa, as well as south-central Persia with the fertile Fars, where Persepolis was founded. The Fortification Tablets mention a system of different properties: the famed and flourishing *partetas* (paradisoi) near Persepolis, *irmatam*, also collection centres for crops and fruits, and the households, *ulhi*³². In the Persian period, the river Pulvar to the north and east of Pasargadae was drained by a system of dams and channels showing the adoption and development of Assyrian engineering technology³³. Furthermore, the Achaemenids could develop and expand the network of trade and cultural relations, from the long-established interacting frontier along the Mediterranean shores to the eastern frontier, where contacts were resumed after a long gap, opening the route to Alexander the Great's Indian adventure³⁴.

The period spanning the 8th, 7th and 6th centuries was accordingly a phase of great dynamism in east-west interaction, including trade exchange, circulation of goods and people, traders, craftsmen and mercenaries and was consequently also a period of increasing competition. Against this background of great cultural and

²⁵ BERNBECK 1993; MORANDI BONACOSSÌ 1996; MORANDI 2000; WILKINSON, BARBANES 2000; ANASTASIO 2007.

²⁶ MAZZONI 1997, pp. 32-34.

²⁷ DAVEY 1985.

²⁸ READE 1978, pp. 61-72; 157-170; READE 1998-2001, pp. 404-407; READE 2002; UR 2005.

²⁹ BAGG 2000, p. 224; UR 2005, particularly see pp. 339-341.

³⁰ DAVEY 1985, pp. 54-55; BARKAY 1992, pp. 332-334; SHILOH 1992,

pp. 275-293.

³¹ KAPTJIN 2008.

³² BRIANT 1996, pp. 456-460. For Syria see MAZZONI 1991-1992; LYONNET 2005.

³³ KLEISS 2000, pp. 753-757.

³⁴ See BRIANT, BOUCHARLAT (eds.) 2005 and especially FRANCFORT 2005 and BOUCHARLAT 2005.

populace mobility we have to posit the intensification of circulation and occupation of eastern and western Arabia. Phase 1 in Arabia probably attested to trends strictly linked to those affecting the northern regions, the Levant, Iran and Mesopotamia. A crisis of the Gulf area, that included a substantial decrease in the circulation of peoples and goods, was probably consistent with the fluctuation of the political and economic geography of the period and the gravitation towards the northern areas and the Mediterranean. In the same way, occupation instability and the shift from a sedentary to a nomadic style of life might have been a general Near Eastern process which, however, occurred with different paces, scales and dynamics of development in the different environment and political orbits. It has been said, speaking of this overall Near-Eastern scenario of crisis, that “This hypothesis appears to be too systematic, but it is consistent”³⁵. If the Arabian and the opposite Iranian shores became less competitive, inner routes along and even across the desert became more favourable, even reaching once distant areas of exotic and prized resources. Phase 2, corresponding to Iron Age II and III, attests to a greater economic *floruit*, to a growth of trade over long distances, to an increase and expansion of settlements all over the Near East, up to the farthest eastern and southern frontiers, Arabia and Iran. It is possible that this was only the climax of a process with distinct regional trends already in progress in Phase 1, and especially in Iron I. In phase 2, however, Assyrian, Neo-Babylonian and Achaemenid hegemonies were the propulsive forces supporting agriculture, demography and settlements increase; the role of their centralised administration and organisation reaching distant countries was certainly a major factor in propelling economic development and must not be underestimated.

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³⁵ BOUCHARLAT 1995, p. 1344.

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