Marta Luciani (Ed.)
The Archaeology of North Arabia
Oases and Landscapes

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Oases and Landscapes

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Preface by the Series Editor

These proceedings regarding "The Archaeology of North Arabia. Oases and Landscapes" represent the 4th volume of the publication series *Oriental and European Archaeology* of the Institute for Oriental and European Archaeology, OREA, founded in 2013. The series aims to reach a cross-regional readership and authorship from both European and Oriental archaeology as well as to consider and discuss these cultural areas as strongly related core zones of cultural development. The high-quality specialisation in our archaeological disciplines is reflected in our diverse publication cultures, usually separated by means of authors and readers. The series *Oriental and European Archaeology* aims to overcome this segregation and combine prehistoric and early historic archaeology from the Orient and Europe. The volumes published to date cover Anatolia and the Aegean in the Chalcolithic period (Vol. 1), the Aegean and the Near East in the Middle and Late Bronze Ages (Vol. 2), as well as Anatolia and southeastern Europe in the Copper and Bronze Ages (Vol. 3). The diverse scientific foci of these volumes have been proto-urbanisation, exchange systems and interaction as well as material sources, metallurgy and knowledge transfer. On the one hand, each of these approaches has combined highly specialised scientific discussions. While they have, on the other hand, enlightened research questions and produced new results and methodologies that will have an impact on the whole of the scientific discipline.

The new volume continues this publication concept by raising basic research topics and presenting essential new results for a broader scientific audience. I am very grateful to my colleague, Marta Luciani from the Vienna University, who initiated and fully organised the conference published in these proceedings. Her dedication to and well-known expertise in Arabian archaeology was the starting point for bringing together experts in this particular field that is generally not the focus of Oriental and Middle Eastern archaeology. The main impact of this volume is the holistic approach of a neglected region by integrating environmental and socio-cultural studies. Additionally, primary data from Arabian archaeological sites from different periods are being published for the first time. Therefore, the book offers our wider scientific community an updated and state-of-the-art overview of northern Arabia with additional detailed information on different aspects of the discipline. The following presented investigations make it clear that there are still many deficiencies in basic archaeological research – a problem to be solved by future projects and generations. However, this volume convincingly demonstrates that northern Arabian archaeology has an important scientific impact on the Middle East, the Mediterranean and beyond. Investigation in neighbouring regions and a broader scope of archaeological and cultural studies will hopefully integrate these results for future research.

My sincere thanks go to the volume editor, Marta Luciani. Financial support has been provided by the University of Vienna, Faculty of Philological and Cultural Studies; the Saudi Commission for Tourism and National Heritage; the Saudi Heritage Preservation Society; the Embassy of Saudi Arabia Vienna; Wien Kultur, Magistratsabteilung 7, the Culture Section of Vienna; as well as by the OREA Institute. Matthias Adelhofer was responsible for text editing, graphics and layout, with support from Estella Weiss-Krejci and Ulrike Schuh in editorial work.

Barbara Horejs
Director of the Institute for Oriental and European Archaeology
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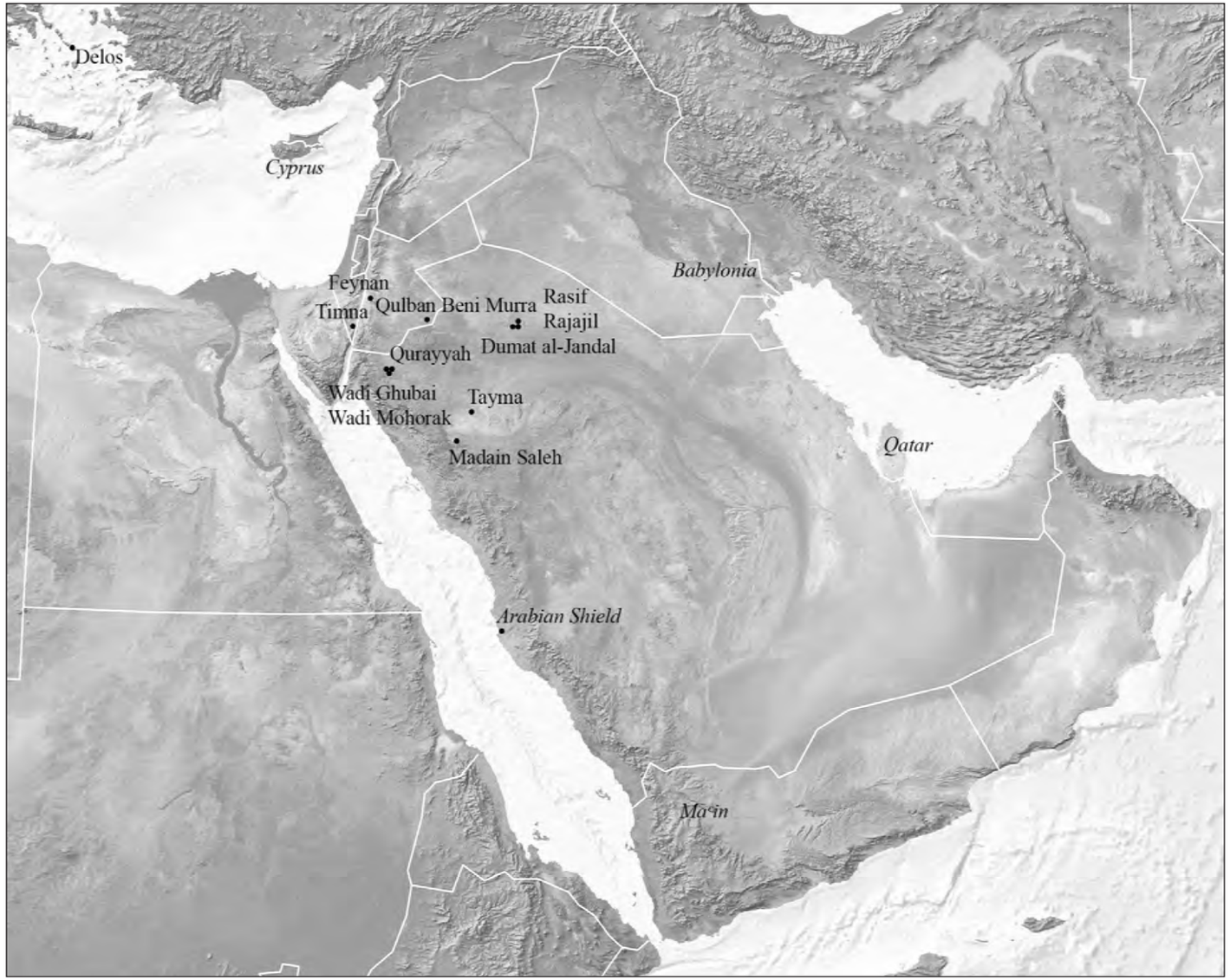

Overview of the main sites and areas in this publication (M. Adelhofer; made with Natural Earth).

Introduction

Publication of the proceedings of an international congress is usually the knee-jerk reaction to the work of finding the financial support and going through the procedure of inviting a number of international scholars to sit around a communal table and discuss shared themes, issues and localities. In the case of the International Congress "The Archaeology of North Arabia: Oases and Landscapes", which took place at the University of Vienna between December 5th and 8th 2013, however, publishing is more of an imperative than unreflectingly following a rule.

Because of the originality of the data and of the different approaches represented at the meeting, in fact, we feel the strong need to present the proceeding to the scientific community. For the first time, a significantly new look at a region of the Ancient Near East that was too often neglected in research and studies in the past decades starts to emerge. It is not only that this quarter of the world was overlooked also this type of environment – oases and different desert landscapes – were frequently disregarded in the practice of archaeology of the Ancient Near East. Also, in fact, long-standing assumptions considered the desert to be void of people, settlements and by inference lacking scientific relevance.[1]

The northern part of the Arabian Peninsula has been known mainly from outer sources – most notably historical texts of the Classical period[2] – and its role has often been confined to that of a throughway for trade in precious goods, perfumes and *aromata*. However, current investigations are increasingly showing that this is only part of the picture – and most likely merely the late outcome of a long history of significant autochthonous occupation and settlement patterns.

Some 22 international scholars from Europe, Japan and the Near East – environment specialists, and experts in archaeology and history especially of North Arabia as well as in cultural management strategies of the entire Peninsula – gathered to discuss the latest results of their work (see programme below). The scientific meeting in Vienna explicitly sought to fill a gap in providing a venue specifically dedicated to presenting and debating new research projects in North Arabia, both in the field and in the library. Because research in northern Arabia, even as opposed to South Arabia and the Gulf, constitutes *de facto* the ultimate scientific frontier in one of the last un- or underexplored regions of the Near East, it is particularly timely to devote attention to this area, now. While different venues for exchange of data and ideas on research on all other parts of the Near and Middle East are extant because of the novelty of archaeological investigations in this region and the pioneering character of the studies and field enquiries carried out by the invited speakers, these have seldom, if ever, been discussed within the frame of a specific scientific meeting.

The International Congress "The Archaeology of North Arabia: Oases and Landscapes" has shown that we are now at a crucial moment for defining new paradigms in research: may they deal with the chronological determination of the onset of the main cultivated species and therefore of the structure and type of agriculture in North Arabian oases (see below Chapter 2), to the trajectory from well-based pastoralist to oasis life (Chapter 3), to the development of funerary landscapes in the Early through Middle to Late Bronze and Iron Ages (Chapters 4, 5 and 7) and the structure of large urban oases (Chapter 1, 5, 8 and 9), or discussing the evidence starting from the written data (Chapter 11 and 12) down to the challenges offered by management of cultural

1 Magee 2014.

2 Groom 1981; Avanzini 1997; Peacock – Williams 2007, but for local texts see Macdonald 2004.

heritage and finding a role for archaeology in times of globalisation (Chapter 13). Two thematic studies (Chapter 6 and 10), moreover, besides the specific information they provide on two distinct artefact classes (a decorated type pottery ware, on one hand, and a group of rock-art depictions, on the other), may be interpreted as significant proxies for mobility, multiple connecting paths and familiarity with travelling and treading the (commercial, military, etc.) routes that obviously must have criss-crossed through the vast expanses of the desert(s).

At the beginning of the International Congress "The Archaeology of North Arabia: Oases and Landscapes" we could hear Ricardo Eichmann – in the frame of the keynote Opening Lecture – discuss the theme of the role of archaeology in Saudi Arabia, in the context of our globalised times. This subject, agagin one most often neglected in the past, has become paramount for scholars who are committed to an informed and critical approach in archaeology. It has finally become a mission also of our discipline to account and discuss perspectives and approaches of European and western scholars and compare them to the ones embraced by scholars and cultural heritage managers stemming from the Near East, as we are all embedded together in the post-modern world of archaeological research.

From its onset with Reinder Neef's contribution "Beginning and development of oasis cultivation in S Jordan and NW Saudi Arabia – An archaeobotanical view" coupled with Michèle Dinies et al.'s paper, "Holocene palaeoenvironment, climate development and oasis cultivation in NW Saudi Arabia – latest results of palynological investigations at Tayma", the meeting set out to challenge old ideas and paradigms on the ancient environment of Arabia. Both these contributions offered for the first time reliable data on the earliest attestations of date palm in the oases of northern Arabia (including southern Jordan). Surprisingly enough, chronological evidence points to the presence of grape and vine *earlier* than the palm tree – and to the latter not being attested before the end of the 3rd millennium BCE (c. 2200 BCE) in northern Arabia. Thus, one of the main tenets of our current ideas of the 'classical' image of the oasis landscape being composed of vegetation dominated by palms[3] and related, second-storey lower fruit trees, turns out to be in need of significant revision, as regards the onset and age of its first occurrence. Furthermore, "the origin of *Phoenix dactylifera* remains enigmatic, and no clear wild ancestor has been identified".[4] Moreover the North African and Middle eastern/South Asian palm varieties are genetically distinct, and although there is evidence of admixture in the cultivars of Egypt and Sudan,[5] the vectors and modalities of the arrival of the palm tree in close-by North Arabia are in need of further investigations.

Also the reports dealing with the earliest occupational phases, those ending chronologically with the third millennium BCE, are offering fundamental insights into a history so poorly known thus far, they possess the potential of commanding wholly new syntheses. Two survey reports focusing on the Neolithic, Chalcolithic through to the Early Bronze Age periods, by Hans-Georg K. Gebel et al. and Sumio Fujii respectively, while partially chronologically and thematically (oasisation/pastoral nomadisation) overlapping, addressed two different phenomena. The first paper discussed on the basis of recent field data six different hypotheses on "a climatologically induced transformation from Arabia's hitherto ill-known mobile shepherd cultures of the 5th millennium BCE to regional onsets or establishments of sedentary oasis life after 4000 BCE",[6] also called oasisation process. One of the main features we see documented in the 'Eastern Jafr Joint Archaeological Project/Qulban Beni Murra' and in the 'Saudi-German Rajajil/Standing Stones Joint Archaeological Project' is the importance of burial landscapes of the mobile pastoralists already during these early occupational phases. The theme of the role of burials and the ritual landscapes generated by them is the object also of the second archaeological contribution

3 Luciani 2010.
4 Tengberg 2012; Hazzouri et al. 2015, 2.
5 Hazzouri et al. 2015, 8.
6 Gebel et al. this volume, 107.

focusing on the Chalcolithic to Early Bronze Age in the NW of the Arabia Peninsula, namely the central part of the province of Tabuk. Significant in this case is that field investigations in this corner of Saudi Arabia are but a due extension of research previously conducted in Syria and Jordan with the explicit goal of probing the "formation process of the *Badia* world, another dimension of the Near Eastern history".[7] Beyond the new data on this specific region and its potential for an overarching synthesis of the entire expanse of the *Badia* in the crucial transitional phases from the pastoral PPNB to the settled oases of the Middle-to-Late Bronze Age, we have the opportunity to grasp distinct parts of the hitherto poorly appreciated environmental diversity of the Peninsula.[8]

Though mentioned only in passing in the original discussion at the conference, the subject of burial landscapes is taken up in the frame of these proceedings and thoroughly elaborated upon by Arnulf Hausleiter, now in collaboration with Alina Zur. Chronologically we progressively advance to the late 3rd to 2nd and 1st millennium BCE. This contribution could incorporate both (recently) established and brand-new evidence stemming not solely from surveys as in the above instances but also from controlled, systematic and salvage excavations. The Tayma evidence is, of course, critical in understanding and defining the onset of the phenomenon of "urban oases". All the above contributions on the earliest phases of occupation converge with Chapter 1 in significantly clarifying different material correlates of the interplay between sedentary and mobile lifeways.

While the transition from the Neolithic through the Chalcolithic into the Early Bronze Age – though still fraught with the difficulties related to finding good samples for precise chronological determinations – gains steadily in resolution, the shift from the late part of the Early Bronze Age to the Middle and then the Late Bronze Age[9] may now be said to be based on increasingly reliable evidence. The now long-standing, continuous investigations of Tayma have also provided firm evidence of an uninterrupted occupation of this large oasis, delivering us confidently from the Late Bronze into the Early and then Middle to Late Iron ages with a reasonably well dated sequence.[10] As we witness the size, complexity (and relevance?) of the site dwindle through time, also the old paradigm that saw the *raison d'être* and importance of this oasis defined exclusively through the Neo-Babylonian king Nabonid's choice of Tayma as royal residence in the 6th century BCE must likely be revised.

Interesting will be also contextualising and comparing the model of large urban oasis inhabited continuously throughout the time (e.g. Tayma) with a different type of desert site, such as Kilwa, on the northern border of Saudi Arabia to Jordan, between Tabuk and Sakaka. In the communication by Saba Farès and Dörte Rokitta-Krumnow on the subject of "Recent results of the archaeological research in the oasis of Kilwa" the presence of different lithic industries points to intense prehistoric activities in the close vicinity of significantly younger, Byzantine-period major architecture.

As we proceed along the chronological ladder from the early part of the Bronze Age, the interconnectedness of the northern part of Arabia with the surrounding regions emerges very clearly from Intilia's study of the ceramics formerly known as 'Midianite Pottery' – because attested in the region that the Old Testament seems to call the 'Land of Midian' – and now better defined as Qurayyah Painted Ware (QPW). The key aspects of this contribution are the underlining of this production as an autonomous manufacture that was well spread along overland routes as far as Amman and the Nile Delta, but at the same time seemingly not made exclusively for (maritime) export as other contemporary wares (e.g. Cypriot or Mycenaean pottery). Even if programmatically confined to revising solely the published evidence, this detailed analysis is successful in pointing out defining questions about the actual homogeneity of this ceramic

7 Fujii this volume, 115.
8 Magee 2014, 11, 14–45.
9 Hausleiter – Zur this volume.
10 Hausleiter 2014.

ware, the mechanisms of its diffusion as well as its chronological frame. While in this case too, the analytical approach lead to the picture growing increasingly precise, a number of issues remain open: In which context should we frame the origin of this pottery: local or borrowed from surrounding regions? At which point in time should we envisage the start of this production? Is the often postulated link between the spread of this pottery in the metal-rich districts of Jordan (Arabah, Feynan) and metallurgical and extractive activities actually borne out by synchronic archaeometallurgical evidence?

Some answers can be broached by new field investigations,[11] but some aspects are bound to remain controversial until ongoing research will have provided a critical amount of new data.

The idea that the archaeology of North Arabia is the ultimate frontier in research of a scarcely investigated area of the Near East was underscored by reports from current field investigations, both surveys and excavation that shifted our focus away from the Hejaz and the northwestern frontier. These are three distinct districts around the Nefud desert: to its South al-Kharj, to its West Madāʾin Ṣāliḥ and to its North Dumat al-Jandal. Jérémie Schiettecatte with Antoine Chabrol and Éric Fouache presented "Landscape and Settlement Process in al-Kharj Oasis (Province of Riyadh)". Also here, in the southeasternmost of the areas of the Peninsula discussed during the International Congress, in the substantial diversity of the local solutions, we find common features with the Hejaz region: the visibility of the Bronze Age burial landscapes[12] and the presence, here too, of well-travelled metal weapons as part of the burial goods that are very likely to stem from the Syro-Mesopotamian world. The in-depth transdisciplinary geomorphological and archaeological approach to the study of, among others, water management structures, allows for the first time the clarification and as a consequence the possibility of a substantiated historical reconstruction of the origins of different water installations such as *falaj*, *qanāt* and *kharaz*, that have long been debated in the literature.

With the communication by Jérôme Rohmer and Zbigniew Fiema, a site-report focussing on "Early Hegra: New Insights from the Excavations in Areas 2 and 9 at Madāʾin Ṣāliḥ (Saudi Arabia)", i.e. late 1st millennium BCE and early 1st millennium CE levels we caught a glimpse of the previously unknown chronological depth of the famous Nabatean site.Two aspects are particularly noteworthy: the poorly-known transition from the period of the rule of the local Lihyanite dynasty to the Nabatean period is now correlated with data stemming from a controlled excavation. The authors are rightly very careful in not overestimating the presence of a single sherd of the so-called 'al-ʿUla' pottery and at the same time draw interesting parallels in chronology and material culture with the surrounding sites (from Tayma to Edom). This only stands to prove how accurately we must proceed in field investigations before reaching a sustainable synthesis. Diachronically and regionally the investigations in ancient Hegra open further avenues of research.

The close-by and largely preceding settlement of Hurayba, ancient Dedan, was presented at the International Congress by Said F. al-Said in a lecture in German language titled "Dedan: Geschichte und Kultur". While this paper focused mainly on the important epigraphic record from the site, a recent publication of the last seven campaigns of archaeological campaigns at Hurayba has recently appeared[13] and offers significant insights into the artefacts found in this major settlement. From the latter and recent evaluations of the material culture, it is clear that Hurayba features a consistent and homogeneous repertory of the Late Bronze Age pottery we call Qurayyah Painted Ware,[14] well comparable with the assemblages attested both in Tayma and Qurayyah herself. This not only supports a novel and relevant shift in perspective on the northern Hejazi polities as connected also to the south and not exclusively to the north and the Levantine

[11] On chronology see Luciani this volume, Chapter 1, 46–47 and fn. 136; on metallurgy see Liu et al. 2015 and Luciani this volume, Chapter 1, 45–46.

[12] See already Chapter 4 and even more so Chapter 5.

[13] al-Said – al-Ghazzi 2013/2014.

[14] Intilia this volume.

or Egyptian cities.[15] It also opens the question on the diachronic connections within the Peninsula among the Hejazi oases: Hurayba/Madāʾin Ṣāliḥ, Tayma, Qurayyah and the changes in sharing material culture from the Bronze Age (QPW present in all three) to the Early Iron Age (seemingly no shared assemblages so far) to the full Iron Age (similarities between Sanaʿiyeh and al-ʿUla pottery, Tayma and Madāʾin Ṣāliḥ) to the Late Iron Ages (circle-and-wedge-impressed wares at Tayma and Madāʾin Ṣāliḥ[16]). For the first time it now becomes possible to address issues of material culture on a regional scale in a controlled and calibrated way.

In the same context we must conceive the two contributions on the other major oasis of the eastern part of North Arabia: Dumat al-Jandal. They focused on two important aspects: water management and roads and mobility in the desert environment. During the international congress Guillaume Charloux presented a paper on speleological research in the buried structures of the oasis and titled "Managing the Water Supply in the Dumat al-Jandal Oasis (northern Saudi Arabia). An Exploration of the Ancient Hydraulic System". Since these investigations still remain quite unique in the Arabian oases it is early to say how much of the details presented can be extended to other sites of the region. Romolo Loreto, on the other hand, discussed "The Role of Dūmat al-Jandal in Ancient North Arabian Routes from Pre-History to Historical Periods". This allowed him both to sketch the rationale behind the existence of this oasis within the network of desert roads it commanded throughout the ages. Also in this case we have evidence of Bronze Age (burial?) landscapes being frequented much earlier – if not as intensively – than the more recent, better-documented caravan routes retracing the well-tread and long-known paths. However, the early history of Dumat al-Jandal (Bronze and Iron Ages) still remains unrevealed (just concealed under the sand?) and therefore highlighting the formative stages of the urban oasis phenomenon in this area remains a matter for future research.

The first day of the international conference was concluded by a keynote lecture by Michael C.A. Macdonald, who by discussing "Some new 'Ancient Records from North Arabia'" underlined how very much our past historical reconstructions of ancient North Arabian societies have been transformed thanks to the more recent textual, epigraphic and archaeological discoveries in the area and revisions in approach. In these proceedings, focusing his contribution on depictions of wheeled vehicles on rock art, he chooses a, or rather, the means of transportation par excellence epitomising overland mobility of goods and people. The contrast between its potential as transport and/or warring tool and its being most unsuitable for the different desert landscapes leads to a counterintuitive exposition of local and borrowed features in this timeless – because mostly very difficult to date with certainty – artistic production.

Alessandra Avanzini discussing "From South to North in ancient Arabia" faced head-on the very important topic of choosing the most likely explanatory model(s) to account for the similarities and cultural contacts between the North and the South of the Arabian Peninsula – and their earliest date – as attested in the written record. Thereby, she criticised a dating of significant migrations of the population in the *historical* period and proposes "an extended zone of cultural contacts between the southern and the northern regions of the peninsula"[17] which seems to agree very well with the most recent reconstructions stemming from archaeological side.[18]

Michael Jursa and Reinhard Pirngruber proposed a joint paper, published in these proceedings only by the latter as "'Arabs' in Late First Millennium BCE Babylonia". This highlighted the role of 'Arab' tribes – though not to be interpreted "in the ethno-linguistic sense" – in a specific period of the late history of Mesopotamia on its price and economic relations. As the written evidence stems from the records of the central administration, it is but one example of the interplay between the latter and the former. Also George Hatke's "Imruʾ al-Qays, Shammar Yuharʿish, and Shāpūr:

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15 Luciani this volume, Chapter 1, 46.
16 See Rohmer – Fiema this volume, 292.
17 Avanzini this volume, 343.
18 See here Chapters 1 and 5.

Arabia between the Lakhmids, Ḥimyarites, and Sāsānids" based on the textual evidence. It constitued a proposal for the reconstruction of political relations between the Arabian Pensinsula and Greater Mesopotamia in the time spanning from the 3rd to 6th century CE.

With the synopsis presented by Sultan Muhesen and Faysal al-Naimi called "An Overview of Archaeological Discoveries in Qatar during the Past 60 Years", we could focus on the subtle interplay between research strategies and Cultural Management choices made in the Gulf state.

For all the mentioned reasons, the importance of the publication of the proceedings of the international congress "The Archaeology of North Arabia: Oases and Landscapes" is multilayered. Beyond the pure sharing with the scientific community of the latest results of field and library work on a region of the ancient world traditionally poorly known, we have the incremental factor brought about by the reflective approach employed by several scholars present at the meeting and committing their observations to print in this volume. Repeatedly, the novel, unpublished evidence pushes them to question old paradigms on the themes ranging from the post-Pleistocene environment in the deserts to the phenomenon of oasisation to the adoption of specific water management structures and techniques or defining cultural and linguistic relations and attempt new syntheses.

As the areas under study have often been neglected in mainstream science, even the mere accumulation of data has the potential to assume paradigm-changing character. Thus, one of the main assets of these different investigations and their publication is that we are now able to discuss models of mobility, communication and sedentarisation in the desert environments throughout the ages ranging from the Neolithic (Chapter 2) through the Bronze Age (Chapters 1, 4–10) down to the Early and Late Iron Age and beyond (Chapters 11–12).

Several of the above observations emphasise a combination of the historical and archaeological evidence with the environmental one. Only a transdisciplinary attempt at bridging the gap among the disciplines (geomorphology, remote-sensing, palaeobotany, palynology, archaeozoology, bioarchaeology, archaeometry, residue analyses, archaeometallurgy, radiometric determinations, history etc.) will allow an all-round, comprehensive interpretation of the resulting data.

But there is a further relevant aspect: our focus on remote and/or un- and underexplored landscapes and societies, until now at the margins of scholarly interest, will allow us to bring them to the attention of other scientific networks thus furthering their inclusion into mainstream research.

With a specific meeting (Workshop: Archaeology of the Arabian Peninsula: Connecting the evidence) which took place on the first day of the 10th International Congress on the Archaeology of the Ancient Near East (10thICAANE), Vienna 25–29 April 2016, the University of Vienna intended to provide a follow-up for the scientific discourse on the Arabian Peninsula started during this first meeting. Not only will this help establish an enduring interest in these regions of the Near East, but it will also help in strengthening the group of scholars dealing with this discipline and placing them in contact with researchers from the better established parts of Ancient Near Eastern Archaeology. Particularly important has been stressing a more inclusive scholarship and an enhanced participation of colleagues stemming from the Arabian Peninsula, something solicited but still largely lacking in our first meeting.

In this frame, there would be great use in asking and debating how this new season of archaeological research in the Arabian Peninsula can expand and improve the basic principle of e.g., the Comprehensive Archaeological Survey Program, started in Saudi Arabia with so much foresight so many decades ago[19] both for scientific goals as well as cultural management needs.

Many questions born out of our scientific meeting remain open: Can we hypothesise the "nutritional value of wild date" already for the 5th or even the 4th millennium BCE[20] in northern Arabia? Is there any dated evidence for this or is the provisional data and later chronology for the

[19] For comprehensive references see Magee 2014.
[20] Gebel et al. this volume, 107.

presence of the date palm as established in Tayma, Saudi Arabia and southern Jordan a localised phenomenon or to be extended to the entire Peninsula?[21] What were the vectors, mechanisms and chronologies of the introduction of agricultural produce in oases (from vines to wild/domesticated date-palms, etc.)? – of the changing of funerary landscapes from ancestral pastures to burial grounds of oasis dwellers? – of the prime movers of sedentarisation and creation of urban oases? – of the relatively sudden change from interconnected local cultures to main hubs of long-distance trade routes in *aromata*?

Does the emerging picture still point to the distinctiveness of the social and cultural structure that historically developed in the Arabian Peninsula as once underlined[22] or will the pushing back of the earliest occurrences of sedentary life, urban oasis, structures for water management, Levantine artefacts compel us to form a thoroughly different view of a more closely knit Ancient Near East? From the early to the late part of the Early Bronze Age, is development significantly induced by contacts and through the adoption of *stimuli* stemming from mainly the north (i.e. the southern Levant) or were the Peninsula's stakeholders developing *pari passu* – though obviously at a very distinctive/diverse pace – with the surrounding polities and regions?

If many issues remain unresolved, we have nonetheless advanced critically in the definition of large time segments (4th to 1st millennium BCE, last centuries of the pre-Islamic era), areas (the northwest and the north), assemblages, degree of mobility and interconnectedness on overland (and possibly also maritime?) routes over the millennia. Admittedly the picture remains mostly patchy. Future research and the enhanced focus on these once only peripheral regions will provide answers and teach us to pose increasingly precise new questions.

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Our organisation was made possible thanks to the good offices of the Saudi Embassy in Vienna and it is with great pleasure that I thank his Excellency Ambassador Mohammed Al Salloum, his

[21] Dinies et al. this volume.

[22] Magee 2014; for Syria and the Southern Levant, Wilkinson et al. 2014.

predecessor Ambassador Prince Mansour Al-Saud and their deputy Mr. Mohammed Madani as well as the Protocol Office Ms. Bernadette Poles, for not only answering but also returning my calls!

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And while the financial aspects need to be given their due recognition, equally – if not more – important is the ideal support to such an international and scholarly enterprise. So it is a pleasure for me to have the possibility to thank all the persons that concurred in making this meeting such a success: first of all Vice-Rector Susanne Weigelin-Schwiedrzik for inspiring and unrelenting support of my efforts for Ancient Near Eastern archaeology in the field and at the University of Vienna. The colleagues Dr. Marcus Zinner and Vivian Salpius of the Research Services and Career Development at the University of Vienna have been extremely supportive and committed to this very cause as well. I am very happy to acknowledge their help. To this group of ideal/factual supporters it is a pleasure to add Prof. Dr. Ricardo Eichmann. As Director of the Orient Department of the German Archaeological Institute in Berlin he has been the leading figure in promoting a consistent widening of the scope of Ancient Near Eastern archaeological research to lesser known corners of the Arabian Peninsula and now also the African continent. His role has been pivotal not only for German research in the Near East but through different networking and cooperation activities also throughout Europe, eventually including Vienna, as well.

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Chronologically last but by no means least, I would like to sincerely thank Prof. Dr. Barbara Horejs, Director of the OREA Institute at the Austrian Academy of Sciences, for kindly suggesting that these proceedings would fit well in the new series she recently created for archaeological publications. Her staff, Mag. Ulrike Schuh, Dr. Angela Schwab, and Univ.-Doz. Dr. Estella Weiss-Krejci was extremely forthcoming and helpful in providing us with the basic format of the volume. Em. o. Univ.-Prof. Dr. Dr. h.c. Manfred Bietak and Dr. Ernst Czerny graciously accompanied the very first steps of these proceedings at the Austrian Academy of Sciences.

The publication was proof-read and entirely formatted by Matthias Adelhofer, who has my profound gratitude for his patience and expertise in setting this volume of proceedings.

The locales for writing these words betray the different commitments I espoused in the last year and rather fittingly my personal high degree of mobility as scholar. It is with pleasure that I acknowledge the support I received in all three locations. In al-ᶜAynah during the 2015 excavation campaign at Qurayyah, I was aided by my colleague and co-director of the project Dr. Abdullah al-Saud (SCTH) and his team as well as by my own team: Prof. Dr. Bernd Teichert, Dr. Andrea Intilia, Laura Machel MA, David Blattner BA, Matthias Adelhofer BA. In Vienna it was good to be able to rely on the staff at the Institut für Orientalistik for the much needed support for this endeavour. In New York, during the year I spent at New York University's Institute for the Study of the Ancient World (ISAW) as Visiting Scholar and Adjunct Professor, I was greatly helped by the entire staff of the institute, in particular by the Director, Prof. Dr. Roger Bagnall's kind guidance, by the Assistant Director for Academic Affairs, Dr. Marc Leblanc's steady support, by

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Marta Luciani
al-ᶜAinah – Vienna – New York
December 2015 – January 2016

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Programme of the International Congress

Friday, 6th Dec. 2013 Congress Venue: Aula am Campus, Spitalgasse 2, Hof 1, 1090 Vienna

9:00–9:10	Vice-Rector Prof. Dr. Susanne Weigelin-Schwiedrzik University of Vienna	Welcome Address on behalf of the University of Vienna
9:10–9:15	H.E. Mohammad bin Abdul-rahman Al Salloum Embassy of the Kingdom of Saudi Arabia	Welcome Address from the Embassy of Saudi Arabia, Vienna (read by M. Madani)
9:15–9:20	Prof. Dr. Ali Ibrahim Al Ghabban/ Jamal bin Saad Umar SCTA	Welcome Address from the Saudi Commission for Tourism and Archaeology
9:20–9:30	Ass.-Prof. Dr. Marta Luciani University of Vienna	Introductory remarks to The Archaeology of North Arabia: Oases and Landscapes.
9:30–10:00	Prof. Dr. Ricardo Eichmann German Archaeological Institute	**Opening Lecture**: The role of archaeological research in Saudi Arabia*
Chair:	Ricardo Eichmann	
10:30–11:00	Drs. Reinder Neef German Archaeological Institute	Beginning and development of oasis cultivation in S Jordan and NW Saudi Arabia – An archaeobotanical view*
11:30–12:00	Dipl.-Biol. Michèle Dinies FU Berlin - Dr. Birgit Plessen, GfZ Potsdam - Drs. Reinder Neef, DAI Berlin - Prof. Dr. Harald Kürschner, FU Berlin	Holocene palaeoenvironment, climate development and oasis cultivation in NW Saudi Arabia – latest results of palynological investigations at Tayma
Chair:	Arnulf Hausleiter	
14:00–14:30	Dr. Hans-Georg K. Gebel Freie Universität, Berlin	First insights on the sociohydraulic foundations of oasis life: Rajail and Qulban Beni Murra (read by M. Luciani)
14:30–15:00	Prof. Dr. Sumio Fujii Kanazawa University, Japan	Archaeological Investigations at the Burial Fields of Wadi Ghubai, Tabuk Province, NW Arabia
Chair:	Said al Said	
15:30–16:00	Dr. Romolo Loreto Università degli Studi di Napoli "L'Orientale"	The role of Dûmat al-Jandal in ancient North Arabian trades from pre-history to historical periods**
16:00–16:40	Prof. Dr. Zbigniew Fiema Humboldt-Universität zu Berlin Dr. Jérôme Rohmer CNRS, Paris	Early Hegra: New Insights from the Excavations in Areas 2 and 9 at Madāʾin Ṣāliḥ (Saudi Arabia)
17:00	Michael C.A. Macdonald Wolfson College, Oxford	**Evening Lecture:** Some new "Ancient Records from North Arabia"***

* Lectures that were published elsewhere and could not be incorporated in these proceedings.
** Lectures published in these proceedings although the author was unable to attend the congress.
*** Lectures published in these proceedings under a different title and/or modified content.

Saturday, 7th Dec. 2013 Congress Venue: Hörsaal, Institut für Orientalistik, Spitalgasse 2, Hof 4, 1090 Vienna

Chair:	Zbigniew Fiema	
9:–9:30	Dr. Jérémie Schiettecatte CNRS, Paris	Al-Kharj oasis: landscape and settlement process from Mid-Holocene to the modern period
9:30–10:00	PD Dr. Arnulf Hausleiter German Archaeological Institute	Oases of northern Arabia in Comparison***
10:00–10:30	Dr. Saba Farès University of Lorraine Dr. Dörte Rokitta-Krumnow Berlin	Survival in drought areas through innovation: agriculture and hydraulic practices in Kilwa*
Chair:	Jérémie Schiettecatte 00	
11:00–11:30	Dr. Andrea Intilia German Archaeological Institute	The Qurayyah painted ware(s): regional distribution and chronological problems in light of newest research (read by A. Hausleiter)
11:30–12:00	Dr. Guillaume Charloux CNRS, Paris	Managing the Water Supply in the Dûmat al-Jandal Oasis (northern Saudi Arabia). An Exploration of the Ancient Hydraulic System*
Chair:	Michael C.A. Macdonald	
14:00–14:30	Prof. Dr. Alessandra Avanzini Università di Pisa	From South to North in ancient Arabia
14:30–15:00	Prof. Dr. Said F. Al Said King Saud University	Dedan (North Arabia) in the textual sources*
Chair:	Alessandra Avanzini	
15:30–16:00	Prof. Dr. Michael Jursa Dr. Reinhard Pirngruber University of Vienna	Northern Arabia in the cuneiform sources of the first millennium BC
16:00–16:30	Dr. George Hatke University of Vienna	Imruʾ al-Qays, Shammar Yuharʿish, and Shāpūr: Arabia between the Lakhmids, Ḥimyarites, and Sāsānids*
Chair:	Marta Luciani	
17:00–17:30	Prof. Dr. Sultan Muhesen Faisal Al Naimi Qatar Museum Authority	Heritage strategies for northern Arabia: An Overview of Archaeology in Qatar***
17:30–18:00	Ass.-Prof. Dr. Marta Luciani University of Vienna	Conclusions

* Lectures that were published elsewhere and could not be incorporated in these proceedings.
*** Lectures published in these proceedings under a different title and/or modified content.

1 Mobility, Contacts and the Definition of Culture(s) in New Archaeological Research in Northwest Arabia

Marta Luciani[1]

Abstract: In this contribution, mobility is analysed as the basic adaptive strategy in different desert landscapes in view of the most recent palaeoenvironmental, palaeoontological and archaeological discoveries in the Arabian Peninsula. Similarities in material cultural traits in remote areas or the presence of finished artefacts imported from afar indicate long-standing streaks of contacts – though clearly selective in time and type and only comprising specific vectors. The paper will focus on the importance of mobility and this interconnection in relation to the phenomenon of large North Arabian oases during the Bronze Age.

Keywords: Mobility, urban oases, Bronze Age, North Arabia, Tayma, Qurayyah, linguistic landscapes, Qurayyah Painted Ware, camel, dromedary, pottery, metallurgical production, oasis water management

Introduction

Current archaeological field investigations in northwest Arabia are finally opening a substantial breach in the ultimate frontier in Ancient Near Eastern research, by investigating an area considered until now so peripheral and marginal, it barely ever features on plans and maps of the region.[2] Revision and challenge of interpretational paradigms that have been valid to the present day are stemming as much from new data as from a long-due change in perspective.

In my contribution I would like to both underline the salient features that new research is bringing about, discuss which latest trend in the interpretation have helped producing a change in our old reconstruction and lastly – but most importantly – to propose a new approach, or better accent, in research acquired from sociological studies of the last years.[3]

New evidence ranges from environmental analysis presenting an unprecedented picture of the Arabian Peninsula as significantly wetter than today and interspersed with palaeolakes in the earliest post-Pleistocene phases[4] or to prehistoric artefacts being re-contextualised and correctly dated for the first time,[5] to the discovery of metal artefacts with Levantine character[6] in several burial contexts from the late Early Bronze Age onwards,[7] to narrowing down partially known pottery classes to a well datable sequence over the second to 1st millennium BCE.[8] I will try to focus on some of these aspects and place them in better perspective below.

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2 See Cleziou et al. 2002 for an analysis of the different reasons why research in this region faced problems picking up pace. Noteworthy is also the fact that they say that "Opportunities for fieldwork have always been quite limited," p. 9.

3 This contribution, conversely, is not meant to be a historical synthesis of the archaeological evidence throughout the ages. For this, see the recent Magee 2014. We have scheduled a specific workshop for the purpose of taking stock of evidence from recent research in the Arabian Peninsula to take place 2016 within 10th ICAANE in Vienna.

4 Dinies et al. this volume.

5 Groucutt – Petraglia 2012; Jennings et al. 2015.

6 Schiettecatte et al. this volume.

7 Hausleiter 2015; Hausleiter – Zur this volume.

8 Hausleiter 2014; Luciani – Machel forthcoming.

On the theoretical side lately, specific focus has been placed on understanding the role of pastoralists in shaping and 'weaving together' ancient Near Eastern civilisations[9] and acknowledging that also traditionally defined 'non-urban' and possibly 'non-elite' parts of the society had agency and were relevant in moulding society. All recent studies tend to mitigate previous dichotomic views of society as differentiated in sedentary and nomads (or 'semi-nomads' as have been called those practicing enclosed nomadism)[10] and reinforce the intimate links[11] – or even identity – of mobile and resident groups, pastoralists and farmers.[12]

An approach that has not been object of specific focus in previous archaeological studies is to view mobility[13] as a structural aspect of societal and settlement fabric. By referring to "'overcoming geographic distance by way of movement', i.e. human movement over time and across space",[14] mobility offers an important perspective on the ability of populations to stretch along large expanses of different environments – the desert not excluded – over time.[15] Along with connectivity,[16] the term mobility has come to play an extremely important role in the latest socio-anthropological research, especially within the frame of the "new mobilities paradigm".[17] This new paradigm stems and pertains in first analysis, of course, to present-day social reliance on fast and very diffused means of transportation and movement of large parts of the population and large amounts of goods either physically (from car to airplane) or virtually through communication of ideas and information (internet).[18]

Obviously none of these means of communication and transportation studied by sociologists of the modern world were at disposal in the prehistoric past we are dealing with. For the longest time not even the camel played a significant role in transport and communication of these desert dwellers. However, the ensuing in the post-modern world of a society that is no longer entirely territorially fixed nor defined exclusively through their affiliation to a national state is – I believe – though surely not a parallel, a suitable interpretational concept for our territorially mobile societies in Bronze and Iron Age Arabia.

Because "although these are not *new* [my emphasis] the mobile character of such processes is now much more evident. Analysis of migration, diasporas and more fluid citizenship are central to critiques of the bounded and static categories of nation, ethnicity, community and state present in much social science"[19] and in historical and archaeological research, I would add.

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9 Porter 2012; Wilkinson et al. 2014 ("agro-pastoral communities that profited from a combination of interregional exchange and sheep husbandry," 84).

10 For recent scrutiny of the terminology and the phenomenon, although in a very different place than the Arabian Peninsula, i.e. prehistoric Iran, see Potts 2014, esp. Chapter 1, Nomadism.

11 "In agro-pastoral lands there is no sharp division between sedentary cultivation and pastoralism" Wilkinson et al. 2014, 96. See also Gilbert 1975, 61 on the lack of substantiation on the polarised concepts of "the desert and the sown". See also Magee 2007.

12 Wilkinson 2003; Szuchman 2009; Porter 2012; Smith et al. 2014 (the three latter with previous references). See also Wilkinson et al. 2014 for a synthesis of the situation in the Fertile Crescent and comparison with the Southern Levantine case.

13 Even if there is, of course, an increasing number of publications on different types of mobilities in the ancient world, e.g. Olshausen – Sauer 2014, Schlesier – Zellmann 2004 to cite only the more recent ones.

14 Naerebout 2015, 1 citing the words of Gisela Welz.

15 One example would be the one emerging from the Fragile Crescent Project underscoring also for the southern Levant "in climatically marginal areas (...) the inhabitants could, by adopting strategies of mobility, maintain higher total livestock populations than would be the case if herds were confined to any climatic zone", Wilkinson et al. 2014, 84.

16 Wilkinson et al. 2014, 45 and 92. The term is based on Peregrine Horden's and Nicholas Purcell's description "the various ways in which micro-regions cohere both internally and also one with another" (Horden – Purcell 2000, 123).

17 Sheller – Urry 2006; Urry 2007.

18 This concept is a development of the ideas beyond "Sociology beyond Society" and has the great merit of focusing "upon movement, mobility and contingent ordering rather than upon stasis, structure and social order" (Urry 2007, 9) something that seems very fitting also to the contingent nature of the archaeological record.

19 Urry 2007, 36.

Fig. 1 General map of the region (modified by M. Luciani based on the original by Hélène David, in: al-Ghabban et al. 2010, 28–29).

Therefore one aspect analysed by this recent sociological research, for example, connects the word mobile to being a "mob, an unruly crowd (...) seen as mobile precisely because it is mobile, not fully fixed within boundaries and therefore need to be tracked and socially regulated".[20] For anyone familiar with the written records of the early 2nd millennium BCE Mari society along the Euphrates, the repeated efforts on the part of the literate urbanites to track down, count and enroll into service the mobile parts of the population are well known examples of this relationship.[21]

[20] Urry 2007, 8.
[21] Durand 1998, 334–353.

The challenge is, therefore, trying to reach beyond a mere mapping of the spatial distribution of imperishable goods evidenced in the archaeological record in order to start thinking "less in terms of fixed locations, and more of patterns of movement. We need to imagine a landscape that was experienced by individuals and groups as they moved around it, rather than one which was envisaged from a single focal point."[22]

As recently summarised by Frank Hole in an agriculturally marginal[23] zone, pastoral mobility provides more security than fixed-place agriculture. Because of the need to sustain herds in a generally arid, strongly seasonal environment, mobility is essential.[24] And if we need to abandon the previously held view of a strong division or duality between sedentary and mobile groups within the agro-pastoral communities in the desert fringes, we still have to fully understand how the development of oases with large sedentary population and monumental architecture came about. A major case in point is the oases of Tayma and Qurayyah, which seem to feature a large extension and complex inner organisation and monumental architecture earlier than the 1st millennium BCE (see below).

The evidence presented and discussed in the course of the International Congress "Archaeology of North Arabia: Oases and Landscapes" increasingly points to pastoral mobility playing an essential role in the definition of the cultures and contacts that developed in North Arabia starting from earliest times.[25] And although our own field investigations are just beginning I will try here to present which aspects have increasingly become relevant in recent research for a better understanding of the role of mobility in the northwest of the Arabian Peninsula during the Bronze Age.

Environment in Northwestern Arabia and Mobile Groups

Beyond the mere change in perspective, there are a several variables relevant to the equation that still need clarification. First of all the environmental one. Northwestern Arabia is characterised by the northern part of the Red Sea coastal strip, the Hejaz mountain ranges with the Harrah and Hisma areas bordering on the Jafr-Tabuk basin, a region reaching up to the fringes of the Nefud desert, i.e. the "quintessential Near Eastern landscape"[26] but also the area bearing the "earliest evidence of water management systems".[27] "Although characterised largely by arid environments today, emerging climate records indicate that the peninsula was wetter many times in the past, suggesting that the region may have been inhabited considerably more than hitherto thought".[28] Human occupation and even traces of agricultural activities in the desert margins are present to a greater range than intuitively and up to now postulated.

Though detailed studies are not present for the Arabian Peninsula proper yet, close-by Negev, notwithstanding being different in many aspects, has been extensively investigated. These studies have enhanced evidence of several peaks in occupation and exploitation of the desert environment from the Neolithic to the Islamic period.[29] However it remains to be seen to which extent arid contexts in the Arabian Peninsula differ from the southern Levantine ones.

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22 Philip 2008, 210.

23 But on marginality being a cultural not a natural parameter see Gilbert 1975, 62.

24 Hole 2009, 261.

25 See e.g. Chapters 3–5 and 7–12 this volume. In fact increasing evidence is being published about the presence of lithic industry in the Nefud desert (Jubbah Basin) of Saudi Arabia already during the Epipalaeolithic featuring similarities with Levantine industries pointing to "interactions between Levantine and Arabian populations during the Terminal Pleistocene – Early Holocene" Hilbert et al. 2014, 460.

26 Wilkinson 2003, 151.

27 Wellbrock et al. 2012, also for the higher level of precariousness of settlement relying on surface water as opposed to those served by groundwater.

28 Jennings et al. 2015.

29 Rosen 2009.

Already sites dating to the Neolithic[30] indicate that occupation extending on a wide area – based on exploitation of well-water sources or channel-type watering systems/troughs – predates the sedentary settlement and is at the origin of the development of horticulture in contexts of sedentary oases (so-called oasisation process). The role of climate optima in this process is still open to different interpretations, but it is not excluded that it were drier conditions that facilitated focusing on the oasis environment. However this may be, it is a fact that in this early phase and in the subsequent Chalcolithic period[31] mobility seems to have substantially contributed to establishing significant contacts in a large area extending across the modern borders of Jordan and Saudi Arabia, thus producing a number of burial/sepulchral and ceremonial landscapes that share common features over stretches of land that possibly extended from the Sinai to the vicinity of Riyadh and possibly even as far south as Yemen.[32]

Burial Landscapes of Mobile Groups

As has been underlined by T.J. Wilkinson, though numerous components of the observed landscape of sedentary groups are not crucial for nomads, religious or sacred places as well as burial areas are deemed necessary.[33] This has been recognised in contexts different from the Arabian Peninsula *strictu sensu*, but bordering the peninsula, i.e., "the numerous groups of burial monuments located along the Jordan Valley escarpment would have formed an integral part of the landscape through which significant numbers of people would have moved".[34]

Two aspects of this phenomenon seem to be significant in desert landscapes: on the one hand, the geographically far-reaching distribution of similar artefacts in burial contexts at a given time and on the other hand, the extended chronological use of burials, either through prolonged use or re-use at different times.

The best known example of the former is surely the attestation of similar burial goods, entire sets or parts of them, such as specific status-marking bronze weapons – e.g., fenestrated axes, ribbed daggers, etc. – found throughout the Levant and Greater Mesopotamia in late 3rd to early 2nd millennium BCE elite and/or warrior tombs. One could hypothesise that these sepulchral depositions were the material correlate of exchange deriving from activities that, as we know from texts, pastoralists were often taking care of, such as message carrying. This constituted a "significant part of international contact.[35] However, I believe that, as has very recently been pointed out, the presence of similar burial sets "of weapons in sites belonging to different ceramic traditions suggests a possibly stronger cultural uniformity" and the adoption of "a wider 'communality of practice' throughout the region during the EB IV period than we may argue only from the analysis of the ceramic record".[36] This evidence further north has come to be seen as a product of "connectivity – fuelled by animal herding"[37] of pastoralists roaming in the region connecting "Canaan and the urban centres of central Syria".[38] However, now that we know that also in the northern part of the Arabian Peninsula, at least one site on the fringes of the Nefud

30 See Gebel et al. this volume.
31 Fujii this volume.
32 In principal also Macdonald's (this volume) analysis of chariot depictions on rock art can be read as to imply that these images should be seen as a proxy for a significant familiarity with travelling (or warring) means of transportations and frequentation of trade routes.
33 Wilkinson 2003, 173.
34 Philip 2008, 210.
35 Porter 2012, 82.
36 D'Andrea 2014, 244.
37 Wilkinson et al. 2014, 92.
38 Bunimovitz – Greenberg 2006, 29.

desert,[39] shared this cultural uniformity with the rest of the Levant,[40] we need to look for a more southerly focus – and explanatory model? – for these occurrences.

Therefore, even if the novel term of "ancestral pastures"[41] – as landmarked by well visible features such as monumental burials, rock art, etc. and being connected with ancestral memories and claims to that land before its becoming the *locus* of sedentary settlement – has been used for an environment that is different from the specific oasis and desert landscape of North Arabia, it will be challenging to test and question whether this could be a plausible explanation for the phenomenon discussed above, as well.

However the explanation of cultural uniformity and connectivity in the late 3rd and early 2nd millennium BCE will turn out to account for the evidence discussed above, a chronologically long re-use especially of sepulchral installations seems to be one of the essential features of burials in these desert regions: it can not only be observed in early Neolithic through Chalcolithic and Bronze Age graves in the northern part of Saudi Arabia,[42] but also in the several Bronze and Iron Ages cemeteries in Tayma and as far south as Kharj.[43] The latter instance features a presence of burials that are installed in areas well protected from the danger of floods in the 2nd millennium BCE (Bronze Age) and are being reused for burial purposes during the Iron Age, graveyards apparently not connected to a recognisable settlement. It is not yet clear whether the use was continued throughout a millennium or repeated, but the heuristic model of strong and significant interaction between mobility and kinship evidenced recently does provide a likely explanation for this phenomenon.

It is tempting to identify kinship within mobile groups as the feature providing geographical and diachronic links by creating sepulchral landscapes with material connected to far away regions such as the Levant and maintaining them or recurrently reactivating them throughout several centuries.[44]

In Tayma, graveyards such as Sanaʿiye[45], Talʿa, Rujum Saʿsaʿ[46] or al-Nasim have proven to contain pottery assemblages[47] ranging from so-called Red Burnished Ware, Barbotine pottery, Qurayyah Painted Ware, painted Early Iron Age ceramics and Sanaʿiye pottery[48] that are now

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39 The findings in the al-Nasim cemetery in Tayma seem contemporaneous with the other Levantine ones (Hausleiter 2015). For similar evidence from the vicinity of the Sanaʿiye cemetery in Tayma see al-Hajiri 2011. Whether also the scimitar in Kharj (Schiettecatte – Wermuth 2015, 51, 78–79) deserves the same interpretation is more difficult to establish: because of the singularity of the occurrence and also because of the longer attestation span of that specific weapon shape.

40 For the 2nd millennium BCE S. Mazzoni (1997, 30) wrote: "Levant-oriented culture largely determined by the cultural homogeneity of its social component, which practiced pastoralism coupled with seasonal agriculture in the marginal environment of the sub-desert fringes, settling in occasional encampments. The homogeneity of the ecological niche of Southern Levant and the hinterland of Western Arabia lead pastoralists to a similar practice of occasional exploitation of diversified economic strategies over long-distances."

41 Wilkinson et al. 2014, 83.

42 Gebel et al. this volume, 90, 97; Fujii 2014, 112.

43 Schiettecatte et al. this volume, 269.

44 Porter 2012, 63: "the practices of kinship, among other things, facilitate the extension of both time and space so that those that are physically apart may remain conceptually together. No doubt the preexistence of kinship allowed for the practice of mobility, but mobility reproduced kinship in certain ways – primarily in the increased significance of genealogy and descent, variously constructed and deployed". On Ibn Khaldun's notion of ʿ*aṣabīya* as relevant mechanism of 'social cohesion' applied to archaeological analysis in the Arabian Peninsula see Magee 2007; Magee 2014, 11.

45 Abu Duruk 1989; Abu Duruk 1990; Abu Duruk 1996.

46 al-Hajri 2002; al-Hajri et al. 2005; al-Hajri 2006.

47 Beuger 2010, esp. p. 136 referring to Talʿa mentions "a large corpus of badly fired white and orange fabrics, painted with bi-chrome and polychrome decoration similar to painted pottery discovered at the tombs of the 'Industrial Site' area (Sanaʿiye) (...) and so-called Barbotine-Ware." Also south of the southern wall of Compound A, in the area called al-Nasim were excavated several cist graves where all the above mentioned pottery was uncovered, Khaled Eskoubi, personal communication during a visit at the excavation in February, 2012.

48 For a precise definition of these different groups see now, Hausleiter 2014.

reliably known to have been used at different time-periods,[49] therefore plainly indicating either a very prolonged or a reiterated use of the same sepulchral installations. Since the earliest investigations of these cemeteries (Sanaʿiye, Talʿa, Rujum Saʿsaʿ), it was clear that there must have been at least a minimum of three to four succeeding phases of construction and use of the graves[50] if not more, all insisting on and progressively augmenting one and the same architectural structure.

What has now been clarified is that this span of time must cover around one thousand years[51] during which the inhabitants of the city of Tayma or other population groups[52] kept on returning to the same sepulchral sites to bury their dead.[53] And while the re-use of burial grounds in different epochs is a well attested phenomenon throughout the Ancient Near East,[54] here the singularity seems to be given by the fact that the sepulchral sites were never completely abandoned[55] but a reiterated memory of the burial places was maintained and cared for throughout time.

It has been argued that especially the more precious of burial good should be read as the material correlates of the (sedentary?) elite and could not have belonged to the mobile part of society.[56] However, for the time being we have no evidence that there was a severe dichotomy between both these parts of the population or that burials should have belonged exclusively to a single one of the two. And it seemed that mobility and connectivity through time and space played a decisive role in shaping formal disposal of the dead in these desert societies.

Linguistic Landscapes of Mobile Groups

The archaeological data presented above seems confirmed by recent linguistic studies. The newest results on the philological re-analysis of ancient Semitic languages, by recognising a stronger similarity and connection between Sabaic and Aramaic if compared to the parallels between Sabaic and other local, neighbouring Ancient South Arabian, languages (Minaic, Hadramitic) hypothesise a proto-Aramaic-Sabaic home in the northwestern fringes of the Arabian Peninsula in the 2nd millennium BCE.[57]

The model of migration of a compact group, carrier of an accomplished and defined set of cultural accoutrements, distinguished from the local Ancient South Arabian, branching off and arriving from the north at the end of the 2nd millennium BCE seems to rely heavily on the traditional method of critical edition, with its efforts in trying to establish an archetype, the original Ω or a unitary proto-language (e.g., proto-Aramaeo-Sabaic) with a corresponding, closely localised

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49 Luciani – Machel forthcoming

50 Abu Duruk 1996, 18–21, plan 8 and pottery pls. 10, 11a–b clearly featuring together: Red Burnished Ware (Abu Duruk 1996 pl. 10a, c; also Abu Duruk 1990, pl. 9B), Barbotine pottery (Abu Duruk 1996 pl. 11c; also Abu Duruk 1990, pl. 9A), Qurayyah Painted Ware (Abu Duruk 1996 pl. 11a–b; also Abu Duruk 1990, pl. 10A–B *passim* – but see Intilia this volume for a detailed indentification of QPW sherds), Early Iron Age ceramics and Sanaʿiye pottery (Abu Duruk 1996, pl. 10d).

51 Luciani – Machel forthcoming; and the ^{14}C dates cited in Hausleiter 2014.

52 As remarked by Abu Duruk (1996, 23): "vast number of these tombs scattered over 10 square kilometers."

53 It must be underlined that the question discussed at the beginning of intensive archaeological investigations in the Hejaz (Tayma and Qurayyah) between American (especially Edens – Bawden 1989) and British (especially Parr 1988) scholars – on there being a significant chronological hiatus in the occupation of these oases – has been established in Tayma in favour of a continuity of occupation and the absence of significant gaps in the material record during the Bronze and Iron Ages (Hausleiter 2014).

54 For recent research on re-use of burials in Yemen's Hadramawt see Bin ʿAqil – McCorriston 2009.

55 As happened, e.g. on the Euphrates cemetery of Baghouz (Du Mesnil du Buisson 1948): after the Middle Bronze Age grave burials are again deepened in the soil during the Parthian period, with an interruption of over 1500 years.

56 Abu Duruk 1996, 23: "And even if we assumed the possibility of import ivory, scarab and other ornaments of a perfect standard this reflects a very high society, superior to the Bedouins."

57 Kottsieper – Stein 2014, 85.

'Urheimat' where the speakers of a single proto-language would have to be localised originally to later ramify at a given moment because of specific events (drought or other).

A possibly more viable model should take into account population groups with a high degree of mobility and ranging across very extended regions, encompassing wide territories, actively engaging in relations and cultural associations along the Hejaz routes and thus providing a strong connection between the northern and southern part – at least in the western sector – of the Arabian Peninsula during the 2nd millennium BCE. The observed isoglossae need not necessarily derive exclusively from a common origin – a "pristine unity"[58] surely more utopical than real and compact – but just as much from interactive, repeated and intended contacts along common routes and landscapes and deliberate expressions of linguistic kinship.

Also the spread of the alphabet along trade routes as opposed to the resistance of ideo-syllabic scripts in the traditional major states of the time[59] is further evidence of the potential of mobile elements of the society to spread and enhance linguistic bonds, affiliations and innovations (in writing). So it does not come as a surprise if much later in Arabia "literacy seems to have been extraordinarily widespread, not only among the settled populations but also among the nomads. Indeed, the scores of thousands of graffiti on the rocks of the Syro-Arabian desert suggest that it must have been almost universal among the latter. By the Roman period, it is probable that a higher proportion of the population in this region was functionally literate than in any area of the ancient world".[60]

Settlement and Mobile Groups in Northwestern Arabia in the Bronze Age

Mobility and connectivity of pastoralists played a fundamental role not only in shaping repeated, diachronic, shared and widespread burial and linguistic landscapes at different times, but contextually also in creating enduring networks of exchange and trade. Steven Rosen's observations on the nature of the relations between the sedentary societies of the Mediterranean (and steppe) zone, and the nomadic societies of the desert[61] indicate that starting with a period defined as Late Timnian in the Negev, corresponding to the Early Bronze Age II in the northern Levant "trade had become crucial to the desert polities"[62] and even in the periods of most intensive settlement size "this pastoral society seems to have had its raison d'être in the desert in the exchange systems with the north and perhaps with Egypt, with a primary focus on copper".[63]

Though we cannot know yet how much of this would apply to desert regions further to the south, the evidence shortly reviewed above indicates that mobility is to be considered a recurring if not a default feature in the organisation of the human landscape(s) in the Arabian Peninsula.

The current paradigm envisages a development of long-distance connections only after the crisis of the end of the 2nd millennium BCE.[64] These commercial ties lead to the famous incense trade system, a caravan route that "represents the means whereby the three protagonists – southern Arabia, Mesopotamia and the Arabs – interacted and reciprocally benefitted. One of the greatest technological innovations of historic times, the domestication of the camel and its use as a pack animal allowed distant centres of civilisation to come into contact. The meeting of populations and cultures was historically limited to distinct ecological niches".[65]

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58 For the idea of a pristine unity as representing a utopia in the explanation of evolution in the Arabian Peninsula, the "opposite to the original centrifugal idea of diffusion and diversification" see Cleuziou et al. 2002, 23–24.

59 Liverani 1997, 563 and map in fig. 3.

60 Macdonald 2004, 488.

61 Rosen 2009, 60.

62 Rosen 2009, 62.

63 Rosen 2009, 63.

64 Liverani 2003, 134.

65 De Maigret 1999.

However, increasingly it seems possible that even long-range[66] contacts were negotiated at a significantly earlier age than previously thought, well before the extensive use of the camel. So the old question of the indissoluble link between the diffusion or better even the domestication of the camel and the opening of the overland desert routes poses itself anew. Populations and cultures from different ecological niches might have been in closer interaction significantly earlier than previously thought.

Two further aspects must be evaluated in the formation of the Bronze Age human landscape in NW Arabia: the genesis/formation of large oases with seemingly urban character, most likely home to a consistent settled population[67] and the possible influence in this and other processes – such as state formation – of external power players: in the case of the northern part of the Arabian Peninsula, its nearest neighbour that can be classified as a big power being Egypt.

To start with the latter first, while Egyptian artefacts and influence seem to be close to inexistent in the southern part of the Peninsula,[68] in the north the situation seems different. There is in fact an archaeologically discernible evidence of Egyptiaca in the form of a cartouche[69] of Ramesses III (1187–1157 BCE) carved on a rock in the vicinity of Tayma, at the fringes of the Nefud desert. Somewhat later, i.e. during the (11th? or) 10th century BCE on the site of Tayma itself, there are numerous items (figurines, scarabs, vessels, etc.) from the temple uncovered in Area O[70] clearly recognisable as being of Egyptian manufacture.[71]

These admittedly rather visible correlates of Egyptian material culture, however, do not seem to be discernible anytime before the 12th century BCE. As a matter of fact, it rather seems an opposite vector was active, with the presence of so-called Qurayyah Painted Ware (QPW) reaching the eastern shores of the Red Sea in the Sinai and further west up to the Nile delta.[72] In the material culture of North Arabia we have no evidence yet of a significant influence of Egypt prior to the end of the Bronze Age.

If we exclude also other external forces in the formation of the 2nd millennium 'urban oases' (Tayma, Qurayyah, Khuraybah[?], Dumat[?], Kharj[?], etc.) phenomenon, we must ask what the movers of this urban development and the essential features of this transition looked like.

For the Syro-Levantine environment it has been claimed that "The cities of the zone of uncertainty might therefore be seen as nodes in a structured network of mobile pastoral strategies, as well as supply stations for animal feed and for travelers and trade caravans".[73] But how is the situation and the system in the arid environment of North Arabia similar or different from those investigated further north? Was climate change conducive to the settlement of donkey-riding mobile herders in North Arabia or made possible by a sudden development of agricultural or transport techniques? Was permanently settling a site dictated by the needs of an overland road-post for trade that eventually initiated an (artificial) oasis or was the oasis environment extant and offered a natural settling site along a self-sustained trade route originating elsewhere? Was trade at the base of the wealth of this settlement or did it stem from agricultural surplus? Which one brought the heavier economic benefit?

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66 On long-distance prehistoric migrations see also Gilbert 1975.

67 At the time being it is difficult to be more precise concerning the real density of inhabitation and therefore concerning the magnitude of the settled population in an oasis context. Not necessarily do the same variables we have been working on defining the different environments of the ancient Near East forcefully and wholly apply here. Clarifying these variables is the task of field research in the present and immediate future.

68 Kitchen 2002, 385. K. Kitchen further argues that also the Ancient South Arabian script points to a N–S contact along the Hejaz line that was later to become the incense road, p. 390.

69 Sperveslage – Eichmann 2012.

70 For the exact date of the Area O temple, see Intilia 2012, 100. For the Egyptian imports see Intilia 2012, 103, pl. 5.14c; Hausleiter 2011, 111–113 and fig. 10; Sperveslage 2013, 240–243.

71 Sperveslage – Eichmann 2012.

72 Intilia this volume, fig. 1.

73 Wilkinson et al. 2014, 84.

Given this background it becomes apparent in the archaeology of the Arabian Peninsula that a significant advance in knowledge and more importantly changes in interpretational models are now strongly dependent on acquiring new data. Because of this we have chosen for field research a region and a site that would allow insights both onto the phenomenon of a large urban site and its settled population as well as the mobile community. Our interdisciplinary approach, with a specific attention to the reconstruction of the ancient environment promises to help us tackle the issues outlined above.

Qurayyah: Old Data and New Evidence

The oasis[74] of Qurayyah is a very extended site articulated in distinguished but connected districts. It is located east of the Hisma, the oriental offshoots of the Hejaz range, c. 70km northwest of the modern city of Tabuk and 26km west-southwest of Bir Ibn Hirmas, the Saudi Arabian customs station on the Hejaz railway (Fig. 2).

Geomorphologically it belongs to the western fringes of the depression of oases and dry lake beds composing the al-Muhtatab basin, the region called Lihh. The area is characterised by broken sandstone and shale hills crossed by innumerable wadis carrying a great amount of flood water that can be immediately utilised by means of dams and channels, but also possesses a destructive potential. Flat topped jebels with a uniform appearance rise to a series of steep rock faces and flat terraces.[75]

Though the region is only starting to be explored systematically now, Qurayyah has been repeatedly described as one of the largest and most significant sites in northwestern Arabia. Because of its size, location and the presence of seemingly late 2nd millennium BCE material on its surface, it is said to have been not simply a strategic trade settlement on the main road connecting the Hejaz with Egypt in antiquity (Fig. 2), but also possibly "the capital of the Kingdom of the Midianites",[76] a people well attested in the Old Testament, Classical sources and the Qur'an as living in the region of the Sinai and northwest Arabia in a period coinciding with the exodus. While a consistent core of historical geographical information can be gleaned from written sources, none pinpoint precisely the location of Midian beyond a general limitation to northwest Arabia, east of Canaan on the Red Sea and not far from Egypt.[77] It is also clear that the different chronology of the historical sources must be more strongly taken into account and their relevance is in need of a deep critical review.

After visits in the area by all major scholars of the 19th and early 20th century[78] of the present era, a first survey was undertaken in a three-week campaign in the spring of 1968 as part of the archaeological reconnaissance of northwest Saudi Arabia.[79] In 1980, in the frame of the Saudi Arabian Comprehensive Survey Program, the region was investigated and a visit was paid again to Qurayyah.[80]

In 2008 and 2009 the Saudi-German team working at Tayma carried out a hydrological, geomorphological and archaeological survey at the site[81] and in the same years a team from the King Saud University conducted a number of soundings within the walls of the Residential Area and limited soundings were conducted with the permission of the SCTA in the Roman

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74 Here intendended as an area with markedly different vegetation from its immediate surrounding region. For a detailed description of the water management situation see below.

75 Parr et al. 1970.

76 al-Ghazzi 2010; al-Ghabban 2010.

77 Chan in press.

78 But the first to really visit the site were B. Moritz (1906) and H. St. J. Philby (1957). For a listing of all previous travellers and scholars who saw or heard about the site see Parr et al. 1970.

79 Parr et al. 1970.

80 Ingraham et al. 1981.

81 Hanisch-Gräfe et al. 2008; Intilia et al. 2009.