Minoan Archaeology
Perspectives for the 21st Century


Sarah Cappel, Ute Gunkel-Maschek, and Diamantis Panagiotopoulos (eds)
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## Contents

Preface and Acknowledgements .............................................................................. III

“Minoan Archaeology”: The Heidelberg Conference Between Past and Future

Sarah Cappel, Ute Giinkel-Maschek, Diamantis Panagiotopoulos .......................... V

Conference Programme ......................................................................................... IX

**Dealing with “Minoan”: 111 Years of Minoan Archaeology**

The Unknown Past of Minoan Archaeology: From the Renaissance Until the Arrival of
Sir Arthur Evans in Crete

Nektarios Karadimas .................................................................................................. 3

Exhibiting the Minoan Past: From Oxford to Knossos

Yannis Galanakis ....................................................................................................... 17

**Data in Progress: Exploring the Cretan Land- and Cityscape**

Chryssi Island: New Evidence on the Bronze Age Settlement Patterns of the Ierapetra Area

Konstantinos Chalikias .............................................................................................. 37

Making the Invisible Visible: Ground Penetrating Radar at Papadiokampos, Crete

Antonia Stamos ......................................................................................................... 53

Capturing the Dynamics of the Minoan Mortuary Space in South Central Crete

Sylviane Déderix ......................................................................................................... 61

Minoan Cityscapes: Urban Planning in Neopalatial Crete

D. Matthew Buell ........................................................................................................ 77

**Let’s Come Together: Places and Spaces of Social and Ritual Interaction**

The Places and the Role of Consumption in MM II Phaistos

Giorgia Baldacci ......................................................................................................... 95

Defining Minoan “Cult Rooms”: Past and Present Approaches to the Archaeology of Cult

Kathrin Müller ............................................................................................................ 109

Between the Physical and Metaphysical: Exploring Aspects of Communication in the
Temple Tomb at Knossos

Mark S. Peters ........................................................................................................... 125

(De)Constructing Identities Through Architecture in LM III Crete

Panagiota A. Pantou .................................................................................................... 135

**Peer Pressure: Social Structures from a “Minoan” Perspective**

For an Archaeology of Minoan Society: Identifying the Principles of Social Structure

Jan Driessen ............................................................................................................... 149

All Aboard: The Longboat and a Heterarchical Interpretation of the Mochlos Cemetery

Steven T. Karacic ....................................................................................................... 167

Social Complexity and Gender Inequality in Prepalatial Crete: An Argument of Reason
or a Reason for Argument?

Maria Mina .................................................................................................................. 181

Connecting with Selves and Others: Varieties of Community-Making across Late Prepalatial Crete

Emily S.K. Anderson ................................................................................................. 199
Social Variation in Middle Bronze Age Knossos: Palaeodietary Evidence
Argyro Nafplioti

On the Household Structure of Neopalatial Society
Emmanouela Apostolaki

Manpower and Neopalatial Architecture: The Architectural Project as a Meaningful Experience
Maud Devolder

BEHAVING “MINOAN”: NEGOTIATING LIFE AND DEATH THROUGH PRACTICE AND PERFORMANCE
Recreating the Past: Using Tholos Tombs in Protopalatial Mesara
Ilaria Caloi

The Body Brand and Minoan Zonation
Anna Simandiraki-Grimshaw

Cultural Performances at the Beginning of the Bronze Age: Early Minoan I and II Cemeteries as Stages for Performance
Katy Soar

Performance Theory in Minoan Rituals and the Ambiguity of Minoan Symbols
Maria Chountasi

(A) Choreographed Frenzy: A Sequence of Steps Towards Understanding Movement and Dance in Aegean Bronze Age Iconography
Céline Murphy

A Portable Goddess: On Performative and Experiential Aspects of Figures and Figurines
Katarzyna Zeman-Wisniewska

“MINOAN” MATERIAL ENTANGLEMENTS: DOCUMENTING AND INTERPRETING “MINOAN” (?) CRAFTSMANSHIP
Minoan Pottery: From Materials to Materiality
Carl Knappett

Pots and Potters: Thoughts on Ceramic Technology and the Craftsmen behind the Product
Sebastian Traunmüller

Transmediterranean Knowledge and Minoan Style Reliefs in Tell el Dab’a: An Attempt at Paradigm Shift
Constance von Rüden

Minoan Archaeology: The Pretence of Being Through Perception, Retention and Recollection
Iro Mathioudaki

CLOSING REMARKS
Formulating Minoan Research in the 21st Century
Peter Warren

List of Contributors
On March 23, 2011 – on the 111th anniversary of Arthur Evans’ first working day at Knossos – the international conference “Minoan Archaeology. Challenges and Perspectives for the 21st Century” was launched at the Institute of Classical Archaeology, University of Heidelberg. For five days, early career researchers shared their ideas and concepts with some leading scholars of the field and engaged in discussions revolving around the current character, potential and scopes of Minoan Archaeology. The group of 32 young archaeologists who presented their work at the conference was complemented by six keynote speakers and two evening lectures.

The present volume is the outcome of this event, a broad assemblage of theoretical positions and methodological issues making up a picture of current approaches taken by both young and established scholars with the aim to explore the culture and society of Bronze Age Crete. First and foremost, we would like to thank all speakers, who embraced the concept of the organizers of the conference and made it such a successful and stimulating event. The conference could not have been realised without the help and support of a number of people, to whom we would like to express our deep gratitude. As PhD students at the University of Heidelberg, Torben Kessler, Yasemin Leylek, Noach Vander Beken and Eva Wacha assisted the editors not only in the lengthy and demanding process of preparation but also in the organization of the event. Their help and support at every level has been invaluable. We are most obliged to the Fritz Thyssen Stiftung for its generous funding which made this conference possible. Our sincere thanks are also due to Professor Jochen Tröger, head of the university’s anniversary committee, who included our meeting among the events marking the 625th anniversary of the University of Heidelberg in 2011, an honour which was supplemented by substantial financial support. We are grateful to the Institute of Classical Archaeology and especially its acting director in 2011, Professor Reinhard Stupperich, for a financial contribution and the allowance to use the institute’s facilities. Further thanks are due to Klaus Kirchner from the university computing centre (URZ) and to Ekkehard Hornung, Hubert Vögele and Marlis Jahraus. Only through their efforts and expertise was it possible to make the conference a broadcasting event, enabling colleagues from all over the world to follow the presentations and join in the discussions via live stream and live chat. Last but not least, we are deeply grateful to all students who helped during the conference, especially during the receptions.

The present volume includes 27 of the papers presented during the conference as well as the Closing Remarks by Peter Warren. We would like to express our sincere gratitude to INSTAP for granting us financial support for the publication of the proceedings. Last but not least, we are most obliged to Jan Driessen for including our publication in the AEGIS series.

Sarah Cappel, Ute Günkel-Maschek, and Diamantis Panagiotopoulos
Conference participants, photographed in front of the Heuscheuer at Heidelberg.
The turn of the new century coincided with the completion of 100 years of systematic archaeological research on Crete. The occasion of this anniversary has already triggered several retrospective and prospective views on the aims, methods, deficits and potentials of this discipline. On 23rd March 2011 – exactly 111 years after Sir Arthur Evans’ spade made the first cut into the earth above the now well-known Palace at Knossos – another conference was launched at Heidelberg with the aim to outline current trends and prospects of this scientific field. What set the Heidelberg meeting apart at that time from other meetings with similar objectives both in the field of Aegean Archaeology and in other archaeological disciplines was the fact that the main body of participants were young researchers who will be shaping the disciplinary self-image in the decades to come. The main aspiration of the organizers was to provide a platform for the younger generation on which they could present their current work, ideas, questions or critiques and receive an immediate feedback by a group of distinguished Aegean archaeologists who also participated in the conference.

By organizing this meeting, our aim was not to proclaim Minoan Archaeology as an independent discipline, but to focus on the vast field of data, issues and methods relating to the material culture of a specific Aegean region, i.e. Bronze Age Crete. Much of what we discussed about empirical evidence, theories and methods has undoubtedly a great relevance to the study of Mycenaean Greece or the Prehistoric Cyclades as well. With the focus on Minoan Archaeology, however, our conference intended to foster an intense discussion, embracing the legacy of the past, the open questions of the present and the challenges of the future of this very particular field of research. Compared to other archaeologies, Minoan Archaeology is a rather young discipline. Its past, present, and future are thus still closely tied together. One of the most distinctive features in its history is undoubtedly the lasting influence of one of its pioneers, Sir Arthur Evans, which is as a fact not at all self-evident. Contrary to many great pioneers in other regions of the ancient world such as Heinrich Schliemann in Mycenaean Archaeology or Sir Flinders Petrie in Egyptology – who in their disciplines are nowadays just history – Arthur Evans’ work still has a strong impact on current research on Minoan Crete. The reason for his strong presence some generations after his death is not just the fact that he came first but that he bequeathed to us his monumental work, “The Palace of Minos”. This opus magnum has provided not only a very impressive narrative of the newly discovered culture but contains a dazzling array of observations, explanations, and hypotheses that cover almost every single aspect of Minoan Archaeology. Evans’ ideas have served and still serve as point of departure for many debates on major and minor issues in our discipline. Be that as it may, there can be no doubt that we have to free ourselves from the heavy burden of his legacy; yet this is not an easy task. A simple reference to his Victorian intellectual background is not enough for discarding his ideas as anachronistic. If we want to overcome his lasting influence, thus making him at last not part of our present but part of our collective memory, we have to completely revise his imaginative synthesis of Minoan culture and his chronology and replace them with something which has to be better and is not just partially amended. In this regard, it was most welcome to see that most of the participants of the Heidelberg conference did shift the focus from Knossos and Evans’ ideas to other Minoan sites and introduced new questions and fresh approaches to Minoan material culture.

Between Evans and the present generation of archaeologists, there have been many scholars from different nations who have dedicated their careers or lives to the study of Minoan Crete, fostering significant advances with their personality, commitment, scientific brilliance and systematic work. Even if their intellectual legacy is nowadays not as vivid as that of Evans, these exceptional personalities have contributed significantly to our ways of dealing with Minoan archaeology. It should thus be a task of future research to give them more weight in our
work. On the other hand, it is apparent that in the history of a discipline – as in the history of cultures – the impact of structures or conjunctures (in the Braudelian sense of the term) is much more significant than that of individuals. There can be no doubt that the trajectory of Minoan Archaeology in the past was determined not only by some exceptional personalities but also by external factors, such as Crete’s and Greece’s turbulent political history in the 20th century, the two World Wars, international diplomacy, economic crises, the difficulties of archaeological research on a densely populated island, different academic traditions, and more recently the terrible constraints on scientific research resulting from the obsession of evaluation and assessments and the – at least paradoxical – employment of quantitative criteria for defining the quality of scientific achievements. From a methodological perspective, one of the most decisive factors in the history of this discipline has been the deep impact of New Archaeology which radically changed the way we collect, treat, evaluate and communicate our data. Minoan or Aegean archaeologists belonged to the pioneers of this major paradigm shift in archaeological disciplines, since they adopted the new way of thinking faster and more forcefully than Classical and Near Eastern Archaeologists or Egyptologists.

Against this background, the conference certainly did not strive to “attack” the great, still open questions of Minoan Archaeology but set a more modest aim, namely to initiate a dialogue about our methods, potential and limitations. It was very important for us to put forward questions on where we stand, where we want to go and which direction we can follow. It was furthermore important, in a meeting that brought experienced scholars and young researchers together, to generate a discussion about what might be a good scientific practice in our field and how we might find the right equilibrium between empirical evidence and the thoughtful application of theoretical models.

After the call for papers, we had the difficult task of selecting and arranging the submitted papers into sessions adhering to a conceptual basis. In a sense, we left our participants to shape the topics of this meeting with their papers. As a result, the overall subject and the thematic orientation of the sessions mirror some current trends of our discipline. Interestingly, most of the contributions do not focus on the abstract notion of culture but on people in their encounters with nature, built space, supernatural forces, foreigners and, of course, with each other. Thus, the broad field of “Minoan society” appeared to us as an appropriate heading for bringing the heterogeneous subjects of the selected papers under a common conceptual umbrella and arranging them into sessions that represent parts of a coherent entity.

Society is understood here as a dynamic structure consisting of a multitude of constantly changing fields and constellations. It is constituted by human interaction and the active manipulation by humans of the material world that surrounds them. The reconstruction of social issues and practices in several periods of the Cretan Bronze Age constitutes one of the main concerns of Minoan Archaeology. This is definitely not an easy task. Only through the development of new theoretical and methodological approaches is it possible to fill the numerous gaps in archaeological evidence. In the early 1980s, the colloquium “Minoan Society” made a first and significant step in this direction. It was the first time that broader issues of the social and cultural history of Bronze Age Crete were addressed with the aim of reconciling theoretical models with material evidence. Following this colloquium, however, material categories such as architecture, pottery or small finds still prevailed in the conception of research projects and conferences. This tendency can also be observed in recently published handbooks on the Aegean Bronze Age that offer an up-to-date overview on the research concerning early Aegean cultures but retain the traditional framework of material culture and only marginally touch upon methodological concepts or future developments of this discipline.

The necessity not only to apply but also to clearly expose the theoretical or methodological background of each approach was therefore the basic criterion for the selection of the papers. The participants had been furthermore encouraged to embed the paper’s subject within pertinent key issues and/or the history of research. In other words, their main task was not only to present their current work but also to put and answer the simple question why this very subject is significant for our discipline and why their own approach marks a step forward compared to previous research. As a result, the Heidelberg conference offered a broad and inspiring range of young researchers’ approaches and methods pertaining to crucial issues of Crete’s Bronze Age culture and archaeology: from innovations in material studies, fresh examinations of long-known archaeological sites as well as new questions

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2 Krzyszkowska and Nixon 1983.
3 Shelmerdine 2008; Cline 2010.
and insights into the history of research, through to the application of recent theoretical advances. In this way, lively debates were generated among the participants, revolving around the past, present, and future of Minoan Archaeology.

For the reasons stated above, the arrangement of the papers into conference sessions was deliberately not based on material categories. In order to avoid decontextualized approaches to single object groups and to prompt discussion on the Minoans’ active role in shaping their societal environment, the sessions were organised according to issues relevant to recent concerns of social and cultural studies in Minoan Archaeology. With the written contributions divided into six sessions, the design of this volume is still based on this premise.

The introductory session *Dealing with “Minoan”: 111 Years of Minoan Archaeology* looks at the very beginnings of Minoan Archaeology and its impact on subsequent generations of scholars. It is followed by theory-based sessions in which different aspects of Minoan society are analyzed. They include the relationship between man and the architecturally constituted environment and landscape (*Data in Progress: Exploring the Cretan Land- and Cityscape*), the construction of social and ritual spaces (*Let's come together: Places and Spaces of Social and Ritual Interaction*), social structures (*Peer Pressure? Social Structure from a “Minoan” Perspective*), performative activities and social interaction (*Be(hav)ing “Minoan”: Negotiating Life and Death Through Practice and Performance*), as well as the documentation and interpretation of the evidence for craftsmanship in Crete and beyond its shores (*“Minoan” Material Entanglements: Documenting and Interpreting “Minoan” (?) craftsmanship*). In the *Closing Remarks*, Peter Warren summarizes the topics of the sessions and presents his impressions of the conference proceedings as well as perspectives on future research agendas.

Despite the comprehensive coverage of the sessions as a whole, there were some obvious gaps which may be indicative of some current trends. Some of the traditional fields, such as the issues of political power, bureaucracy, and imagery, were rather underrepresented among the submitted papers if not totally absent. These gaps can be regarded as a reflection of the current state of the art in Minoan Archaeology and the preponderance of new issues which gradually transform our discipline and expand its thematic and methodological range.

So, what about the future? We have every reason to look to the future of Minoan Archaeology with optimism. Several big questions remain unanswered, there are still “palaces” and “villas” to be unearthed, two writing systems to be deciphered, many important finds in the magazines of the Cretan museums that await proper publication, and, last but not least, a whole arsenal of inspiring theoretical instruments which may open up new avenues of research. The possibilities of Minoan Archaeology are unlimited and promise a very dynamic development in the future. The results of the conference published in this volume clearly reflect the necessity and, at the same time, the potential of bringing together young and established researchers not only for the formulation of prospective research agendas but also for a re-evaluation of previous research. Through the publication of the conference proceedings we hope to contribute to the continuation of this fruitful discussion and trigger similar meetings in the future with the aim to re-evaluate previous research and to set some new agendas for the further development of this discipline.

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4 For the conference programme, see pp. ix–xi in this volume.
Bibliography


Conference Programme

WEDNESDAY, 23.03.2011

17:00 Registration
19:00 Welcome and Introduction
19:30 EVENING LECTURE: Eleni Hatzaki (Cincinnati)
Knossos and the Making of “Minoan” Archaeology. Research Agendas and Results, Past, Present, Future
afterwards: Reception

THURSDAY, 24.03.2011

SESSION I DEALING WITH “MINOANS”: 111 YEARS OF MINOAN ARCHAEOLOGY
9:00–9:30 Nektarios Karadimas (Athens)
The Unknown Past of Minoan Archaeology: From the Renaissance until the Arrival of Sir Arthur Evans in Crete
9:30–10.00 Ioannis Galanakis (Oxford)
Oxford to Knossos: Sir Arthur Evans’ s Legacy and the Exhibition of the Minoan Past
10:00–10:30 Bryan Burns (Wellesley)
The Minoan Body: Twentieth-Century Revivals Reconsidered
10:30–11:00 COFFEE BREAK

SESSION II DATA IN PROGRESS: EXPLORING THE CRETAN LAND- AND CITYSCAPE
11:00–11:45 KEYNOTE LECTURE: John Bennet (Sheffield)
Cityscapes, Landscapes, and Seascapes: Space and Place in Minoan Archaeology
11:45–12:15 Kostas Chalikias (Heidelberg)
Chryssi Island: New Evidence on the Bronze Age Settlement Patterns of the Ierapetra Area
12:15–12:45 Alessandra Ferraro (Naples)
A GIS Platform for the Protopalatial Site of Monastiraki (Amari Valley, Crete)
12:45–14:15 LUNCH BREAK
14:15–14:45 Antonia Stamos (Philadelphia, presenting), Chryssa Sofianou (24th Ephorate of Prehistoric and Classical Antiquities) and Thomas Brogan (INSTAP East Crete Study Center)
Making the Invisible Visible: Ground Penetrating Radar at Papadiokampos, Crete
14:45–15:15 Sylviane Déderix (Louvain-la-Neuve and Rethymnon)
Capturing the Dynamics of the Minoan Mortuary Space in South Central Crete
15:15–15:45 D. Matthew Buell (Buffalo)
Minoan Cityscapes: Urban Planning in Neopalatial Society

SESSION III LET’S COME TOGETHER: PLACES AND SPACES OF SOCIAL AND RITUAL INTERACTION
15:45–16:30 KEYNOTE LECTURE: Clairy Palyvou (Thessaloniki)
Archaeology and Architecture: Different Disciplines in Common Tasks
16:30–17:00 COFFEE BREAK
17:00–17:30  Giorgia Baldacci (Athens)  
*The Places and the Role of Consumption in MM II Phaistos*

17:30–18:00  Kathrin Müller (Berlin)  
*Defining Minoan “Cult Rooms” – Past and Present Approaches to the Archaeology of Cult*

18:00–18:30  Mark S. Peters (Sheffield)  
*Between the Physical and Metaphysical: Exploring Aspects of Communication in the Temple Tomb at Knossos*

18:30–19:00  Panagiota A. Pantou (Buffalo)  
*(De)Constructing Identities through Architecture in LM III Crete*

**FRIDAY, 25.03.2011**

**SESSION IV**  
**PEER PRESSURE? SOCIAL STRUCTURES FROM A “MINOAN” PERSPECTIVE**

9:00–9:45  KEYNOTE LECTURE: Jan Driessen (Louvain-la-Neuve)  
*All in the Family? Identifying Minoan Social Structure*

9:45–10:15  Steve Karacic (Bryn Mawr)  
*Exotica and the Longboat: Mortuary Evidence for Heterarchical Structures in Prepalatial Mochlos*

10:15–10:45  Maria Mina (Nicosia)  
*Gender as a Gauge of Social Complexity? The Case of Pre-Palace Society on Crete*

10:45–11:15  COFFEE BREAK

11:15–11:45  Sandra Lozano Rubio (Madrid)  
*Gender Asymmetries in Minoan Crete: A New Agenda*

11:45–12:15  Emily Anderson (Baltimore)  
*Connecting with Selves and Others: Varieties of Community-Making across Late Prepalatial Crete*

12:15–12:45  Luca Girella (Louvain-la-Neuve)  
*Diversity vs. Similarity. Exploring the Mortuary Evidence in Middle Minoan III*

12:45–13:15  Argyro Nafplioti (Athens)  
*Social Stratification in Middle Bronze Age Knossos: A Bioarchaeological Perspective*

13:15–14:30  LUNCH BREAK

14:30–15:00  Emmanouela Apostolaki (Athens)  
*On the Basic Social Unit of the Neopalatial Society*

15:00–15:30  Maud Devolder (Louvain-la-Neuve and Athens)  
*Manpower and Neopalatial Architecture. The Architectural Project as a Meaningful Experience*

**SESSION V**  
**BEHAVING “MINOAN”: NEGOTIATING LIFE AND DEATH THROUGH PRACTICE AND PERFORMANCE**

15:30–16:15  KEYNOTE LECTURE: Yannis Hamilakis (Southampton)  
*Bodily Senses, Emplaced Memories, and the “Emergence of the Palaces” on Bronze Age Crete*

16:15–16:45  Ilaria Caloi (Venice)  
*Recreating the Past. Using and Re-Using Tholos Tombs in Protopalatial Mesara (Crete)*

16:45–17:15  COFFEE BREAK

17:15–17:45  Anna Simandiraki-Grimshaw (Kent)  
*The Body Brand and Minoan Zonation*

17:45–18:15  Katy Soar (Nottingham)  
*Performing Death: Performance, Social Differentiation and Architectural Space in Early Minoan Cemeteries*
18:15–18:45  Maria Chountasi (Thessaloniki)
*Performance Theory in Minoan Rituals and the Ambiguity of Minoan Symbols*

**SATURDAY, 26.03.2011**

9:00–9:30  Céline Murphy (Kent)
*Choreographed Frenzy: A Sequence of Steps towards the Understanding of Movement, Gesture and Dance in Minoan Iconography*

9:30–10:00  Katarzyna Zeman-Wisniewska (Dublin)
*A Portable Goddess. On Performative and Experiential Aspects of Figures and Figurines*

**SESSION VI  SOCIALIZING POTS: THE INFORMATIVE VALUE OF VASES IN UNDERSTANDING SOCIAL ISSUES**

10:00–10:45  KEYNOTE LECTURE: Carl Knappett (Toronto)
*Minoan Pottery: From Materials to Materiality*

10:45–11:15  COFFEE BREAK

11:15–11:45  Iro Mathioudaki (Athens)
*Minoan Archaeology: the Pretence of Being through Perception, Retention and Recollection*

11:45–12:15  Andrea Vianello (Oxford)
*Closed-Context Deposits and Middle Minoan Social Hierarchy*

12:15–12:45  Sebastian Traunmüller (Heidelberg)
*Pots and Potters – Thoughts on Ceramic Technology and the Craftsmen behind the Product*

12:45–14:15  LUNCH BREAK

**SESSION VII  “MINOANS” AND THE OTHERS: TRACING NETWORKS AND INTERACTION IN THE AEgeAN**

14:15–15:00  KEYNOTE LECTURE: Susan Sherratt (Sheffield)
*“Minoans” and the Others*

15:00–15:30  Borja Legarra Herrero (Leicester)
*Looking to the East, Thinking of the West: Contextualizing Cretan Early Bronze Age within Mediterranean Prehistory*

15:30–16:00  Angelos Papadopoulos (Athens)
*Looking Back to the Earlier Interactions between Crete and Cyprus from an Eastern Mediterranean Perspective*

16:00–16:30  COFFEE BREAK

16:30–17:00  Manolis Mikrakis (Nicosia)
*Cross-Cultural Aspects of Music Making in Minoan Crete*

17:00–17:30  Constance von Rüden (Bochum)
*Minoan Style Reliefs from Tell el Dab’a – A Case of Transmediterranean Knowledge Transfer*

19:00  EVENING LECTURE: Aleydis van de Moortel (Tennessee)
*The Middle Bronze Age Boat from Mitrou: First Light on Building Concepts and Seafaring Capabilities of Bronze Age Aegean Boats*

afterwards:  Reception and Visit of the Exhibition „Inseln der Winde“ (Islands of the Winds) in the Abguss-sammlung of the Institute of Classical Archaeology

**SUNDAY, 27.03.2011**

9:30–12:30  ROUND TABLE chaired by Peter Warren (Bristol)
Dealing with “Minoan”

111 Years of Minoan Archaeology
The article aims to systematically present the period from the Renaissance until the beginning of the 1890s, when Arthur Evans first arrived in Crete. It discusses how scholars discovered and identified prehistoric sites in Crete, defined cultures and coined terms, which inspired Evans in the construction of his Minoan paradigm. In doing so, it resurrects the work of scholars, such as Buondelmonti, Müller, Hoeck, Pashley and Spratt, and it assesses their importance in the development of Minoan studies, showing the intellectual debt that Evans owed to them. Moreover, this article aims to show that the period before the 1890s was no tabula rasa for Minoan archaeology, but an important and interesting phase, in which important discoveries and theories took place, some of which continue to influence current scholarship.

Arguably, most works on the history of Minoan archaeology begin with Sir Arthur Evans’s excavations at Knossos, thus implying that the period before him represents for Minoan studies some kind of tabula rasa.1 However, while Evans remains the main discoverer of the material remains of what he called “Minoan civilisation”, in terms of his interpretations, he is much indebted to previous scholarship. For centuries before Evans, other scholars were interested in what we now call the prehistoric times of Crete: on the one hand, philologists and historians, who never visited the island, worked through their libraries and studied the ancient history of Crete; on the other hand, travelers, who actually set foot on the island, made the first topographical and archaeological observations. This article discusses this long period of “Minoan studies” before Evans, which lasted almost 500 years, and is divided into four main sections: 1) from the Renaissance to 1820; 2) the decade between 1820 and 1830, which saw the emergence of very influential studies on ancient Crete by scholars based at the university of Göttingen; 3) the period of 1830–1875, which saw the first archaeological and topographical researches on the island; and 4) the period of 1876–1894, representing the phase between Schliemann’s discoveries at Mycenae and Evans’s first visit to Crete.

I. The Unseen Foundations of Minoan Archaeology (From the Renaissance Until 1820)

The Renaissance was a cultural movement that deeply shaped modern thinking largely through the renewed study of ancient classical texts and ancient civilisation. As few “pre-Dorian” material remains were known, most scholars, philologists and historians exclusively based their ideas on ancient written sources. By meticulously examining the Homeric poems and other ancient works, they endeavoured to describe the religion, politics, ethics, social organisation of Crete during the Heroic or Homeric times, as the prehistoric times were commonly called at that period.

In terms of religion and social organisation, it is interesting to note that scholars, such as William Mitford, believed that kings in Heroic and Homeric times exercised supremacy in matters of religion in addition to their political obligations.2 Kings were effectively considered to be Priest-Kings, a term that was frequently employed in Homeric discussions of the 18th–19th centuries. The best example was Minos himself, as suggested by Gottfried Herrmann

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1 Most part of the present article is based on my unpublished Ph.D. dissertation “Prolegomena to Aegean Archaeology; from the Renaissance until 1876” (University of Bristol, 2009). I would like to thank my supervisor Dr Nicoletta Momigliano for her help and continuous support, as well as my examiners Prof. Gerald Cadogan and Dr Silke Knippschild.

2 See, for example: McDonald 1967, chapters I–IV; Warren 1975, 1–12, esp. 12; Stiebing 1993, 124–42; Fitton 1996, 9–46.
The Unknown Past of Minoan Archaeology

in 1802: “Piester und König bestanden bei den Griechen in einer Person. Minos war König und Priester.”3 The
notion of a Priest-King was also adopted by Arthur Evans himself, who sought to identify portraits of Priest-Kings
in a series of Late Bronze Age seals, and, most famously, in a relief fresco known as the “Priest-King”.4

The figure of Minos is also important for other issues concerning the religious, social and political organisation
of prehistoric Crete, which found their way into the work of the “father” of Minoan archaeology. Many contra-
dictory ancient Greek myths existed around King Minos: most ancient authors supported the existence of a single
person, while others spoke of two Minoses.5 To solve this problem, most scholars suggested that there had been
two Minoses: the first was the lawgiver and the second the master of the seas.6 The problem became more acute
towards the end of the 18th century, when Indo-European studies begun. Some scholars, such as Jacob Bryant,
William Holwell and William Jones noticed many similarities between Minos and other mythical figures from
other cultures, such as the Egyptian Menes, the Indian Menus, and the German Mannous.7 Other scholars preferred
comparisons with the Jewish Moses, who had climbed Mount Sinai to receive the laws from his God, in the same
way as Minos had climbed Mount Ida to receive the laws from Zeus.8 Besides their almost identical names, these
figures shared a number of features: they were sons of gods, first kings, and had introduced laws and arts to their
people. Because of this, some scholars, such as Allwood and Plass, argued that Minos’s name indicated a title or a
dynasty,9 and this became a crucial tenet in Evans’s reconstruction of Minoan Crete.10

While philologists and historians tried to understand Crete’s most distant past through the available written
evidence, Crete was becoming the centre of intense archaeological interest.11 From the Renaissance onwards,
travellers visited the island in increasing numbers. Unsurprisingly, during this period interest in non-classical sites
or monuments was very limited. Classicism prevailed in Europe during the 15th–18th centuries, and this caused
travellers to visit mainly classical monuments.12 This phenomenon was further accentuated by the publication of
Winckelmann’s Gedanken über die Nachahmung der griechischen Werke (1755),13 and from 1762 onwards by
Stuart’s and Revett’s magnum opus, The Antiquities of Athens.

Two Cretan sites, which were dated to Minos’s times, were the most popular attractions: Knossos (or Gnoossus
as it was usually called at that period) and the Labyrinth of Minos. The renewed interest in these sites was due
to the intellectual revolution of the Renaissance, which soon reached Venetian Crete. The eighth book of Ovid’s
Metamorphoses, devoted to the story of Minos, piqued visitors’ interest in the latter. In particular, after the inven-
tion of the printing press, Ovid’s Metamorphoses underwent many editions, which sometimes included elaborate
illustrations of Minos’s labyrinth, based on coins found at Knossos.14

References to the ancient site of Knossos started to appear in Venetian documents at the end of the 14th century.
Knossos had largely disappeared, but its original location was never forgotten. Following Strabo (X.4.7), who
wrote that the site of Knossos was 25 stadia from the sea, most travellers remarked that walls, potsherds and coins
of the city of Knossos existed very close to a small village, which from the beginning of the 15th century AD was

3 Herrmann 1801–1802, 2:300. In the same way, Karl August Böttiger noted a few years later: “die Priester und Könige, eins in dersel-
ben Person, repräsentieren oft selbst die Götter” (Böttiger 1826, 1:208).
4 Evans 1900–1901, 15–6; 1928, 774–95. For the “Priest-King” fresco, see also Coulomb 1979; Niemeier 1988; Sherratt 2000; Shaw
2004.
5 E.g., Homer (Iliad, N, 448–454), Herodotus (1.173), and Thucydides (I.8 and I.2) spoke of one Minos, while Diodorus of Sicily
(Bibliotheca Historica, IV.59) mentioned two Minoses.
7 Bryant 1775, 2:414–40; Holwell 1793, 279; Jones 1794, preface.
8 E.g., the French monk Huet suggested that Minos and Moses were the same person (see Banier 1739–1740, 3:486; Tressan 1797,
335–36). Evans himself, also, used to compare Minos to Moses at least in his first Aegean publications: “Minos the Cretan Moses”
(Evans 1894, 371); “Minos is the Cretan Moses” (Evans 1901, 116).
9 Allwood 1799, 273; Plass 1831, 179.
10 In 1906 Evans wrote for example: “Le terme ‘minoen’ a au moins l’avantage de ne pas dépasser les conins d’une neu-
tralité ethnographique. Se servir de ‘Minos’ comme de ‘César’ ou de ‘Pharaon’ ne suscite pas les questions embrouillées des Cariens et des
Pélasges, des Achéens, ou même des Libyens.”
11 For general information about travellers to Crete, see Rice 1933; Hemmerdinger-Iliadou 1967; Simopoulos 1970–85; Warren 1972,
2000.
12 See, for example, Georgopoulou et al. 2007; Sève 1993.
13 Translated into English in 1766 as Reflections concerning the Imitation of the Grecian Artists in Painting and Sculpture.
14 E.g., Salomon 1557; Spreng 1563; Micyllus 1582. One of the best editions was made by George Sandys in 1626 (republished in
1632), who had visited Crete, the “Gortyn Labyrinth” and possibly the site of Knossos as well.
Nektarios Karadimas

known as Makrytoichos (Μακρύτοιχος). Among the dozens of visitors who visited Knossos a few are worthy of mention: Onorio Belli (visit in 1586), Francesco Basilicata (in 1630) and Claude Etienne Savary (in 1779).\(^\text{15}\)

Regarding the Labyrinth of Minos, it was often believed that this famous structure was a cave/quarry near Gortyn, as this is well illustrated by numerous maps of the 15th–18th centuries. It is likely that this identification grew in prominence because the “Gortyn Labyrinth” seemed manmade, containing numerous dead ends. This belief was particularly promoted during the Cretan Renaissance by the Venetian governors, who sought to have the “real” Labyrinth in their territory. Gasparino Barzizza mentioned that the Venetian rulers of Crete regularly organised pleasant journeys to the “Gortyn Labyrinth” for magistrates or other visitors from Venice.\(^\text{16}\)

In the 18th century most travellers suggested that the “Gortyn Labyrinth” was, in fact, a quarry that provided building materials for the ancient city of Gortyn. Among the most important visitors to the “Gortyn Labyrinth” are Cristoforo Buondelmonti (visit in ca. 1415), Pierre Belon (visit in 1547), Joseph Pitton de Tournefort (in 1700), John Hawkins (in 1794), Charles Cockerell (in 1811) and Franz Sieber (in 1817).\(^\text{17}\)

II. The “Göttingen School” and the Idea of a Minoan Civilisation (1820–1830)

When, at the end of the 18th century, the distinguished German classicist Friedrich August Wolf (1750–1824) introduced the idea of Altertumswissenschaft or “science of antiquity” as a new approach to the study of the past, little did he know of the impact that his ideas were going to have on Minoan and Aegean studies in general.\(^\text{18}\) According to this new approach, the ancient world was to be studied in its entirety, by encompassing all the aspects of a civilisation. History had to be concerned not only with narratives of events, kings, and battles, but also with other aspects of life such as religion, art, and economy.

Influenced by the ideas and the methods of the new Altertumswissenschaft, three scholars played a significant role in the subsequent study of Minoan archaeology: Karl Otfried Müller (1797–1840), Karl Friedrich Neumann (1793–1870) and particularly Karl Hoeck (1794–1877) (fig. 1). They were all based at the well-known University of Göttingen, and it is fair to say that the publications of these scholars, whom one may dub the “Göttingen School”, established a number of influential theories about prehistoric Crete that had a great impact on many scholars, and most importantly on Sir Arthur Evans. In 1820, Neumann published the Rerum Creticarum Specimen, written in Latin. From 1823 until 1828, Hoeck published his seminal three-volume work Kreta. Ein Versuch zur Aufhellung der Mythologie und Geschichte, der Religion und Verfassung dieser Insel, von den ältesten Zeiten bis auf die Römer-Herrschaft, while in 1824, Müller published Die Dorier, which was also translated into English (in 1830 and 1839).

Neumann’s, Müller’s, and Hoeck’s works are excellent examples of the methods of the Altertumswissenschaft applied to classical sources on Crete. For the first time, the earliest history of Crete was examined systematically and meticulously. This involved the study of comparative religion, the etymology of personal names such as Minos, Europa and Pasiphae, and the examination of toponyms. Not only mythology, but also ancient artefacts, whenever possible, were used as valid sources for a better understanding of Greek and Cretan history and prehistory.\(^\text{19}\)

The most important contributions of the Göttingen scholars to the study of Aegean prehistory were made by Müller and, in particular, by Hoeck. Both promoted the idea that in the second half of the second millennium BC Crete

\(^{15}\) On Belli, see Falkener 1854; Beschi 1999. Basilicata’s manuscript was published by Spanakis in 1969. Savary 1788a, 192–93 and 1788b, 214–15. On Knossos before the first excavations, see also Kopaka 2004.

\(^{16}\) See Woodward 1949; Guarducci 1950.

\(^{17}\) Aposkiti 2002, 50; Belon 1553, 8; Tournefort 1702; Lack and Mabberley 1999, 126; Cockerell 1820, 402–9; Sieber 1823, 1:510–20 and 2:293–97.


\(^{19}\) For example, in the first volume of Kreta, Hoeck included a small chapter on the “Gortyn Labyrinth”, reproduced a map of the Labyrinth from Sieber 1823, and illustrated two coins of the ancient town of Knossos (Hoeck 1823, 447–54, pl. II).
had been the home of a brilliant civilisation. This civilisation was dubbed “minoisch” (which British scholars, including Evans, later translated as “Minoan”), while the period in which it flourished was called “minoische Zeit”. Moreover, Hoeck suggested that the ancient Greek sources had attributed to a single historical or mythical figure named Minos, a series of events which took place over a long span of time, and thus Hoeck claimed that the name Minos represented the totality of acts that occurred during a period of about two centuries before the Trojan War. This notion of a “Minoan Age” appears to have been formulated by analogy with that of the “Homeric Age”, which was already established by the early 19th century.

In view of later developments in Minoan archaeology, it is worth noting that the Göttingen scholars also produced fairly detailed suggestions about the chronology of Cretan Prehistory (fig. 2). For the period before the “Return of the Dorians” they made extensive use of notions of growth, maturity, and decadence – notions that formed an important part of Evans’s own Minoan chronology. Neumann subdivided Cretan prehistory into the pre-Minos’s, Minos’s and post-Minos’s times. Hoeck, on the other hand, distinguished four periods. The first was called pre-Minoan (vorminoisch), and related to the times before King Minos; during this period Phrygian and Phoenician colonists came to Crete and, through their mixing with aboriginal inhabitants, Homer’s “Eteocretans” were born. Hoeck’s second or “Minoan” period occupied two centuries before the Trojan War; it was the most brilliant in the whole history of the island, during which the non-Hellenic Eteocretans created a splendid civilisation, which was farther ahead than its Greek mainland counterpart. This “Minoan period” included the “Minoan Thalassocracy”, which ended around 1250 BC, and soon afterwards Crete came under a strong Hellenic influence. When the Trojan War started (around 1200 BC), a period of decline and decadence began, a post-Minoan phase. For a brief period of almost 160 years a Hellenised Minoan dynasty continued to rule, which surely reminds us of Evans’s reoccupation period. By the time the Dorians arrived at Crete around 1040 BC, little remained of the Minoan civilisation.

Müller’s reconstruction presented some fundamental differences. The most important was that, according to Müller, the Minoan Cretans were Greek, and more specifically Dorians. This could be proved not only by the myth of the Dorian Tectamus, who was Minos’s grandfather, but also by the cult of the main Dorian god, Apollo, who was usually associated with the Minoan Cretans. Müller divided Crete’s most ancient times into four phases. The first embraced the first Dorian migration to Crete from their original homeland in Thessaly, and saw the foundation of temples of Apollo at Delphi, Delos, and Crete. During the second phase, the acme of the Minoan civilisation, the Dorian Cretans took control of the Aegean sea and spread their cult of Apollo everywhere. After Minos’s death, two or three generations before the Trojan War, a period of decline began. This period was followed in turn by the main Dorian migration.

In view of recent critiques of the term “Minoan”, it is interesting to note that in the works of Müller and Hoeck the term “Minoan”, unlike today, did not have racial or ethnic connotations, but essentially a chronological meaning. In a sense, it was used in a way similar to the term “Pharaonic”, because for the Göttingen scholars the term did not refer only to the reign of the mythical King Minos, but to a period of up to two centuries. Whenever Hoeck and Müller referred to the prehistoric inhabitants of Crete they used phrases such as the “Minoan Cretans” (die minoischen Kreter) or the ethnonyms Eteocretans (Hoeck) and Doriains (Müller), if they wished to refer to their

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20 On the term “Minoan”, see also Karadimas and Momigliano 2004.
21 Hoeck 1828, xxxi: “Alles bedeutsame mehrerer Jahrhunderte ward an jenen Namen (Minos) angereiht.”
22 As suggested, for example, by Uvarov 1819, 7: “seitdem der Name Homer nicht mehr einen Menschen, sondern eine Epoche bezeichnet.” See also below, section III.
23 For Hoeck’s absolute dates, see Hoeck 1823, 359–61; 1828, 4.
Interestingly enough, Evans himself in his early work did not use the term “Minoan” in an ethnic sense, for he was still closely following Hoeck’s views. For example, in the early years of the excavations at Knossos, Evans constantly used expressions such as “Minoan architects”, “Minoan dynasts” and “Minoan Priest-Kings”, which certainly resembles Hoeck’s similar expressions, such as “minoischer König”, “minoischer Kreter” or “minoischer Stamm”.

The publications of the “Göttingen School”, especially Müller’s and Hoeck’s books, had a tremendous impact on Cretan scholarship. Very soon, Müller’s and Hoeck’s ideas of a “minoische Zeit” and a superior Cretan civilisation spread through not only Germany, but also other countries. The historian Evelyn Abbott was not wrong when he wrote in 1893: “Hoeck’s Kreta is still the best book about the island.”

III. George Grote’s Rationalism and the Beginning of the First Archaeological and Topographical Researches (1830–1875)

The rationalism and philological criticism of the 18th century, so well illustrated by the “Göttingen School”, gave also momentum to another tendency, which regarded the use of ancient written sources for historical purposes with great scepticism. The main attack on the credibility of the ancient Greek tradition came in 1795 when Friedrich August Wolf published his Prolegomena ad Homeri. In this book Wolf refused to accept the historical existence of an individual poet called Homer, suggesting instead that the Iliad and the Odyssey represented the unification of many different rhapsodies, composed over several centuries and collected under the name of Homer. Wolf’s theory soon led to the debate on the “Homeric question”, while Wolf’s followers were dubbed analysts.

In the mid 19th century the most important reaction to the use of myths as historical sources came from the British historian George Grote, with his twelve-volume History of Greece. Influenced by Wolf and the analysts, Grote suggested that Homer was not a real historical character, but was invented to explain the historical guild that was constituted to conserve and transmit the Homeric poems. Moreover, in the preface of the first volume published in 1846, Grote noted that he was going to use myths to describe the earliest times of the Greeks, without, however, trying to detect how much or how little historical matter they contained. In doing so, he compared Greek myths to a marvellous curtain that hid nothing and would greatly disappoint anyone who opened it.

Nonetheless, Grote’s scepticism about the usefulness of myths stands almost alone in British historiography. British scholars preferred to follow in the steps of the “Göttingen School”. It is fair to say that this sceptical attitude had little if any impact on Aegean and Cretan archaeology. According to Arnaldo Momigliano, by making this distinction between a mythical and historical Greece, Grote “broke with K.O. Müller and his English admirers”. It seems that only Arthur Evans was slightly influenced by Grote, but only in the early stages of his career. In 1883, when Evans wrote a review of Schliemann’s Iliad, he noted that “Archaeology has little call to concern itself with the fitting on of poetical topography to altered physical conditions”. Twenty years later, enchanted by his remarkable discoveries at Knossos, he would forget his initial scepticism.

During the period discussed in this section, Crete continued to attract travellers from all over Europe, such as Félix Victor Raulin (visit in 1845), George Perrot (in 1857), and John Skinner (in 1867), while in 1864 the painter Edward Lear visited Knossos and painted two unique watercolours (now housed in the Gennadius Library). Two travellers, however, laid the foundations of modern Cretan archaeology: Robert Pashley and Thomas Abel Brimage Spratt.

In 1834, Robert Pashley (1805–1859), a young classics don from Cambridge and later a respected lawyer, took his Grand Tour to the Ionian islands, Albania, Greece, and Asia Minor in 1833–1834. From February until September of 1834 he travelled through the island of Crete, as recounted in his Travels in Crete (1837). His book contained many topographical notes. Pashley discovered and described the existing vestiges of more than 20 an-

24 E.g., Hoeck 1828, vi, xxiv, 187, 189, 233, 236, 369, 378, 380, 391; Müller 1824, 234.
26 Abbott 1893, 122–23.
27 On the “Homeric question” and in general on Wolf, see Ferreri 2007 with extensive bibliography.
28 Grote 1846, 1:xii–xiii.
29 Momigliano 1966, 63.
30 Evans 1883, 438.
31 See also Momigliano 2006.
32 Raulin 1869; Perrot 1867; Skinner 1868. On Lear, see Fowler 1984.
33 On Pashley, see Garnett 2004.
cient sites, such as Eleutherna, Praesos, and Knossos. While looking for the celebrated tomb of Zeus, he climbed on Mount Juktas, where he saw cyclopean walls. Pashley also visited the “Gortyn Labyrinth”, and remarked that it was a cave. Following the tradition according to which the Labyrinth was not a cave but a building erected by Daedalus at Knossos, he concluded that it was “as clear as the sun at noon day, that the grotto in question was no more connected with the mythical labyrinth of Crete”.

Thomas Spratt (1811–1888), naval officer and hydrographer, surveyed the coast of Crete in the 1850s to produce the British Admiralty Charts, as well as the interior of the island for his geological map of Crete. In 1865 he published his Travels and Researches in Crete, which focused on the physical geography and geology of the island, and tackled many problems of ancient topography. Spratt visited Knossos, about which he wrote a whole chapter. He explored the “tortuous passages and chambers” of the “Gortyn Labyrinth”, which he suggested was a quarry. He discovered the ancient site of Zakros in eastern Crete. During his explorations he also collected some “primitive” seal stones, such as those that previous travelers had observed and collected in the Cyclades, and for this reason they were usually called “island stones” (fig. 3). He published them in 1879, soon after Schliemann’s impressive finds at Mycenae. Most of these seals are now dated to the Late Bronze Age. Spratt’s most important contribution to Cretan archaeology was probably his discussion of the acropolis of Goulas near Hierapytna (modern Ierapetra). According to Spratt, the acropolis should be dated to an early date, as shown by the earliest and rudest Cyclopean walls.

Pashley’s and Spratt’s books became the standard guidebooks for the island in the 19th century, and inspired Arthur Evans when he started his Cretan exploration. For example, Evans who visited the site of Goulas three times, originally wanted to excavate Goulas, because he thought it was a prehistoric citadel. On the other hand he never visited the “Gortyn Labyrinth”, simply because, according to Pashley or Spratt, it was a cave or a quarry. Similarly, following Pashley’s text, Evans visited the summit of Juktas twice, while in 1909 he conducted a small excavation there, and discovered the remains of a peak sanctuary.

34 Pashley 1837, I:210–11.
35 Pashley 1837, I:296–97, see also 208.
36 See, for example Milchhöfer 1883, chapter 2 entitled “Inselsteine”. For the history of “island stones”, see Boardman 1963.
37 Spratt 1865, I:chapter XIII.
<table>
<thead>
<tr>
<th>Date</th>
<th>Site</th>
<th>Known before 1875</th>
<th>Excavator/Excavators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1877 (20 Jan. &amp; 27 Jan.)</td>
<td>Mycenae: Treasure nearby Circle A</td>
<td>√</td>
<td>Drosinos &amp; Stamatakis</td>
</tr>
<tr>
<td>1877 (June)</td>
<td>Spata: 2 chamber tombs</td>
<td></td>
<td>Stamatakis</td>
</tr>
<tr>
<td>1877 (end of Nov.–beg. of Dec.)</td>
<td>Mycenae: Shaft Grave VI in Circle A, Treasury of Atreus</td>
<td>√</td>
<td>Stamatakis</td>
</tr>
<tr>
<td>1878 (26 March–6 May)</td>
<td>Heraion (Argos): Tholos tomb</td>
<td>√</td>
<td>Stamatakis</td>
</tr>
<tr>
<td>1878 (July)</td>
<td>Palamidi (Naflpio): Chamber tombs</td>
<td>√</td>
<td>Potamianos</td>
</tr>
<tr>
<td>1878 (end of Aug.–beg. of Sept.)</td>
<td>Palamidi (Naflpio): Chamber tombs</td>
<td>√</td>
<td>Kastorchis &amp; Kondakis</td>
</tr>
<tr>
<td>1878 (Dec.), 1879 (March–April)</td>
<td>Knossos</td>
<td>√</td>
<td>Kalokairinos</td>
</tr>
<tr>
<td>1879 (30 April–7 June)</td>
<td>Menidi: Tholos tomb</td>
<td>√</td>
<td>Lolling</td>
</tr>
<tr>
<td>1880 (February)</td>
<td>Palamidi (Naflpio): Chamber tombs</td>
<td>√</td>
<td>Kondakis</td>
</tr>
<tr>
<td>1880 (11 March)</td>
<td>Palamidi (Naflpio): 1 chamber tomb</td>
<td>√</td>
<td>Lolling</td>
</tr>
<tr>
<td>1880 (end of Nov.–beg. of Dec.)</td>
<td>Orchomenos: Treasury of Minyas and adjacent area</td>
<td>√</td>
<td>Schliemann (with the collaboration of Efstratiadis, Sayce &amp; S. Schliemann)</td>
</tr>
<tr>
<td>1881 (12 April–end of April)</td>
<td>Orchomenos: Treasury of Minyas and adjacent area</td>
<td>√</td>
<td>Schliemann (with the collaboration of Efstratiadis, Sayce &amp; S. Schliemann)</td>
</tr>
<tr>
<td>1884 (end of Jan.–beg. of Feb.)</td>
<td>Antiparos: Almost 40 tombs of the Early Cycladic period</td>
<td></td>
<td>Bent</td>
</tr>
<tr>
<td>1884 (17 March–24 May)</td>
<td>Tiryns</td>
<td>√</td>
<td>Schliemann ( &amp; Dörpfeld)</td>
</tr>
<tr>
<td>1885 (mid of April–mid of June)</td>
<td>Tiryns</td>
<td>√</td>
<td>Dörpfeld</td>
</tr>
<tr>
<td>1885 (October)</td>
<td>Amorgos: Early Cycladic tombs</td>
<td></td>
<td>Dümmler</td>
</tr>
<tr>
<td>1886 (27 Feb.–10 March)</td>
<td>Dimini: Tholos tomb known as Lamiospito</td>
<td>√</td>
<td>Kondakis &amp; Kousis (with the collaboration of Lolling &amp; Wolters)</td>
</tr>
<tr>
<td>1886 (March–beg. of June)</td>
<td>Mycenae: Acropolis (palace)</td>
<td>√</td>
<td>Tsountas</td>
</tr>
<tr>
<td>1886 (beg. of May)</td>
<td>Orchomenos: Treasury of Minyas</td>
<td>√</td>
<td>Schliemann ( &amp; Dörpfeld)</td>
</tr>
<tr>
<td>1887 (18 Oct.–31 Dec.)</td>
<td>Mycenae: 15 chamber tombs and 1 Tholos tomb</td>
<td>√</td>
<td>Tsountas</td>
</tr>
<tr>
<td>1888 (20–29 March, June–Dec.)</td>
<td>Mycenae: Acropolis and 36 chamber tombs</td>
<td>√</td>
<td>Tsountas</td>
</tr>
<tr>
<td>1888 (August)</td>
<td>Epidaurus: Chamber tombs</td>
<td></td>
<td>Stais</td>
</tr>
<tr>
<td>1888 (December)</td>
<td>Eleusina: Mycenaean tomb</td>
<td></td>
<td>Filios</td>
</tr>
<tr>
<td>1889 (Spring)</td>
<td>Pagassai (Volos): Mycenaean cemetery</td>
<td></td>
<td>Wolters</td>
</tr>
<tr>
<td>1889 (4–12 April, 13 May–15 June)</td>
<td>Vafio: Tholos tomb</td>
<td>√</td>
<td>Tsountas</td>
</tr>
<tr>
<td>1889 (18 May)</td>
<td>Troizina: Mycenaean tomb</td>
<td></td>
<td>Stais</td>
</tr>
<tr>
<td>1889 (July)</td>
<td>Mycenae: Acropolis</td>
<td>√</td>
<td>Tsountas</td>
</tr>
<tr>
<td>1889 (November)</td>
<td>Palaiopyrgos: Mycenaean pottery and stone finds</td>
<td></td>
<td>Tsountas</td>
</tr>
<tr>
<td>1889 (November)</td>
<td>Arkina: Tholos tomb</td>
<td></td>
<td>Tsountas</td>
</tr>
<tr>
<td>1890 (summer?)</td>
<td>Amykles</td>
<td></td>
<td>Tsountas</td>
</tr>
<tr>
<td>1890 (Sept.–Dec.)</td>
<td>Mycenae: Acropolis &amp; 2 chamber tombs</td>
<td>√</td>
<td>Tsountas</td>
</tr>
<tr>
<td>1890 (December)</td>
<td>Thorikos: Tholos tomb (known as A)</td>
<td></td>
<td>Stais</td>
</tr>
<tr>
<td>1891</td>
<td>Mycenae: Tholos tomb of Clytemnestra</td>
<td>√</td>
<td>Tsountas</td>
</tr>
</tbody>
</table>

**Fig. 4** Prehistoric excavations in the Aegean during the period 1877–1892. The third column shows sites that had been identified as Heroic (i.e. prehistoric) before Schliemann’s excavations at Mycenae.
IV. Between Two “Fathers”: From Schliemann to Evans (1876–1894)

In 1876, Heinrich Schliemann excavated at Mycenae where he discovered the “rich in gold” Shaft Graves. This unexpected discovery changed the history of Aegean prehistoric archaeology. Until that time, Greek scholars were almost exclusively interested in classical antiquities, largely as part of the general effort to link the Greek modern State with its celebrated classical past. After Schliemann, suddenly the Greeks remembered that they also had a Heroic past, so gloriously sung by Homer, and in the following decade, Greek archaeologists excavated almost all the sites that had been identified by previous travellers as Heroic, i.e. prehistoric, as clearly demonstrated in figure 4. Their excavations brought to light the remains of a pre-Classical civilisation, which was soon named “Mycenaean” by German scholars.

In the following years, until Evans’s arrival in Crete in 1894, many archaeological researches were also conducted in Crete, of which the most important are as follows.

At the end of 1878/beginning of 1879, taking his cue from Schliemann’s discoveries, the Cretan Minos Kalokairinos excavated at the well-known site of Knossos. His results were very promising: he excavated part of the west magazines, where he found pithoi, Linear B inscriptions, and many vases. However, due to the troubled political situation in the island – almost a decade before the Cretan Insurrection – his excavations were soon stopped. Kalokairinos’s finds were later seen by Arthur Evans, who also visited Knossos.

A significant contribution was made in 1883 when Arthur Milchhoefer published the book *Die Anfänge der Kunst in Griechenland*. Milchhoefer, who was Privatdozent in archaeology at the University of Göttingen, revived Hoeck’s “Minoan” theory; he argued that the origins of the newly discovered Mycenaean civilisation should be found on the island of Crete. Now, for the first time, Cretan prehistoric archaeological finds could support this opinion: the so-called “island stones”, Cyclopean walls seen by Pashley and Spratt, a stirrup jug recently found in Crete, and in particular Kalokairinos’s newly discovered finds at Knossos. Milchhoefer’s theory became a fundamental principle in Evans’s “Minoan” paradigm. As noted by John Myres in his obituary of Evans, “Milchhoefer’s *Anfänge der Kunst* (1883) may have influenced him more than he would afterwards admit”.

Last but not least, in 1884, a new piece of the “Minoan” jigsaw puzzle came to light. Federico Halbherr, exploring the site of Praisos, discovered an “Eteocretan” inscription (i.e. written in Greek letters, but expressing a non-Greek language). It was this inscription that persuaded Evans about the correctness of Hoeck’s non-Greek theory about the inhabitants of Crete in the “Minoan Age”.

Conclusions

In 1894, when Arthur Evans arrived in Crete, he was following in the footsteps of remarkable predecessors. As shown in this paper, Evans not only used previous archaeological and topographical research, but also borrowed

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41 On Minos Kalokairinos’s excavations, see a small selection of articles: Haussoullier 1880; Aposkiti 1979; Kopaka 1990, 1992 and 1996.
42 Milchhoefer 1883, 121–37.
43 The stirrup jug was published a few years later in 1886 by A. Furtwängler and G. Löschecke (Furtwängler and Löschecke 1886, 24, pl. XIV, no. 88).
44 Myres 1941, 14.
45 The inscription was published by Domenico Comparetti in 1888 (Comparetti 1888, 673–76).
or modified earlier theories in order to interpret his finds. Unfortunately, in his publications, he paid little tribute to earlier scholars, whose ideas he relied upon, giving thus the false impression of exclusive originality in everything that related to “Minoan” Crete. The history of archaeology, involving the study of now forgotten works such as Hoeck’s *Kreta*, may help us not only to correct such false impressions, but more importantly, to regard the work of past archaeologists within the broader intellectual context of their time. As Glyn Daniel has remarked, “One of the great values of studying the history of archaeology is to realize that it is not a simple straightforward record of discovery; it is a record of discovery mixed with false assumptions and forgery and refusal of established archaeologists to regard their work historically.”

Bibliography


Exhibiting the Minoan Past: From Oxford to Knossos

Yannis Galanakis

More than 160 years after his birth and 70 years from his death, Arthur Evans’s legacy remains strong. Through his excavations, publications, lectures, and extensive restorations, he solidified his vision of the Minoan past that dominated Aegean archaeology for generations. Yet Evans was not only a leading archaeologist; he was also a successful Keeper of the Ashmolean Museum in Oxford between 1884 and 1908. The present paper aims to address his role as Keeper and assess how his position within the museum might have informed his work at Knossos. After an introduction to the Museum and Evans’s work there, the paper explores his role in displaying and interpreting the Minoan past through the exhibitions he organized in Oxford and London. Evans’s instructive approach to material culture, set within the framework of Victorian and European scholarship, is presented here as one of the fundamental influences on his work both in England and in Crete.

The proceedings of every Minoan conference are bound to include discussions on the work and interpretations of Arthur Evans, the most influential of the pioneers of Cretan archaeology. Most of the discussions tend to focus on Evans as a field archaeologist. Yet, for 25 years Evans was Keeper of Britain’s oldest museum, the Ashmolean of the University of Oxford. The present paper looks at Arthur Evans as curator of temporary and permanent exhibitions and how this role might have informed his work in Crete, especially in relation to his extensive restorations at Knossos.

The Ashmolean

Before exploring Evans’s museum role, it is worth looking briefly at the history of the Ashmolean. The museum was primarily based on the collection of curiosities of the John Tradescants, father and son – both royal gardeners. The collection was universal in scope, combining anthropological with natural history specimens. By deed of gift, it passed to Elias Ashmole, the famous antiquary, who in 1677 promised it to the University of Oxford. Founded in 1683, the Ashmolean was open to the public – to the disgust of a German visitor, Zacharias Conrad von Uffenbach (1683–1734), who in 1710 complained that “it is surprising that things can be preserved even as well as they are, since the people impetuously handle everything in the usual English fashion … even the women are allowed up here for sixpence; they run here and there, grabbing at everything.” Uffenbach’s description is probably accurate: the inevitable processes of decay took their toll on the collection, with the result that in 1824 “the skins of animals collected by the Tradescants had fallen into total decay … and that the apartment dedicated to the exhibition of them had become much dilapidated.”

In 1850, the University of Oxford decided to establish a new Natural History Museum, at which point all the natural history specimens from the Ashmolean were transferred to the new institution. Much of the Ashmolean’s original – essentially scientific – content was lost and the Museum’s identity had to be reconfigured. As discussions were in progress about the new Natural History Museum in Oxford, there were voices advocating that the new role for the Ashmolean was that of National Antiquities; a museum for English archaeology, following the foundation of similar national collections across Europe. Although this idea never fully materialized, the Ashmolean did find a major new role in the emerging field of archaeology. It is exactly at this point, a crucial juncture in the museum’s history, that Arthur Evans became Keeper in 1884.

1 The Ashmolean houses today the Sir Arthur Evans archive that includes, in addition to the extensive documentation of his Knossos excavations, hundreds of letters, numerous diaries and notebooks, drafts of lectures and articles. This presentation stems from our ongoing work to catalogue the Arthur Evans archive in preparation for its digitization.


3 Quarrell and Quarrell 1928, 26–31.

4 Duncan 1836, vi.

5 Parker 1858; 1870, 9 where he notes “The Museum is now a Museum of Archaeology only. What is Archaeology? It is History in detail, and the details are tenfold more interesting than the dry skeleton called School Histories”; see also Chester 1881.
Arthur (1851–1941) was the son of the famous prehistorian John Evans (1823–1908), one of the foremost scientific figures of his time. He studied history in Oxford and after a rather adventurous career as a journalist in the Balkans, he returned to Oxford in 1883, age 32.⁶ The University was for a long time contemplating the creation of a post of a professor of archaeology, which was finally established in 1884. Evans, influenced by his father’s collecting attitude and interest in archaeological exploration was keen to apply for the post. After all, he had already developed an interest in local archaeology from his student years to the extent that his tutor found it remarkable that in his final examinations for modern history, he wrote about nothing later than the 12th century AD.⁷ Yet, the professorship was advertised for Classical Archaeology in the end. Evans, a rather unorthodox classicist, advocated that the post should have embraced all periods, not least because this would have made him a more suitable candidate.⁸

One should not, however, discredit Evans’s genuine interest in creating an international centre for archaeology in Oxford. His appointment to the keepership of the Ashmolean in 1884 offered an excellent opportunity for that. Following John Henry Parker (1806–1884), his predecessor, and the reverend John Greville Chester (1830–1892), a prominent collector of antiquities and supporter of the museum, Evans became a fervent and determined supporter of a museum of archaeology in Oxford. In his inaugural lecture on 20 November 1884 entitled “The Ashmolean Museum as a Home of Archaeology in Oxford” he advocated the following:

“We are no mere relic-worshippers … and this Museum is not to sink into an ‘Old Curiosity Shop’, a dingy receptacle for the odds and ends of antiquity and of those objects of which it has been said ‘that they are only now rare because they were always valueless’ … consider for a moment the services rendered within quite recent years by what has been called Prae-historic archaeology, but which in truth was never more historic, in widening the horizon of our past. It has drawn aside the curtain, and revealed the dawn. It has dispelled, like the unsubstantial phantoms of a dream, those preconceived notions as to the origin of human arts and institutions … before the days of biblical chronology.”⁹

For Evans, archaeology was a science expounding the “great doctrine of Evolution” so that “arbitrary divisions of chronological periods and the unnatural divorces of styles are swept away.”¹⁰ In this respect, he echoed the post-Darwinian era in exhibiting the past, a view that came into sharp contrast with earlier approaches to the display of the Ashmolean’s collections, for example according to the tenets of William Paley’s Natural Theology (1802).¹¹ Evans envisaged a central role for archaeology encompassing all periods and all regions, at a time when a number of classical scholars had a different view.¹² His emphasis on the role of “Prae-historic archaeology” in particular and his attempt to bring closer together the arts and archaeological remains displays his erudition as well as the influence exercised upon him by his father and his wider circle.¹³

“… in a Country where knowledge is stereotyped in the interests of conventionalism, and centralised in the interests of the cram, … we should have one Institution at least which, as the home of Archaeology in its widest extent, should be a refuge for neglected studies and forgotten arts. Such, Gentlemen, is the place and no other that I would claim for the Ashmolean Museum.”¹⁴

More than anyone else in the recent history of the Ashmolean, Arthur Evans was responsible for transforming it into a first-rate archaeological museum, the finest in England outside of the national institutions. During his keepership, and with the generous financial support of Charles Fortnum – of the family of famous grocers,
Yannis Galanakis

Fortnum & Mason – Evans was able to move the collections from their old building in Broad Street to an extension built specifically for this purpose at the back of the University Galleries, where the paintings, sculpture and classical casts were housed. Evans was determined that art and archaeology should co-exist for the benefit of the public and specialist alike.

With Evans buying for the museum some 2,000 objects a year – especially as part of his visits to Italy and Greece – the old Ashmolean building soon proved inadequate for displaying the objects. In addition, Evans offered in 1884 to relinquish the important ethnological holdings of the Ashmolean to the newly founded Pitt Rivers Museum.15 His main aim was to gain space for the archaeological material, while demanding the centralization in the Ashmolean of other archaeological collections, which, according to him, were inappropriately held in other University departments,16 most notably the University Museum and the entire coin cabinet of the Bodleian Library.

Perhaps Evans’s single most important achievement during his keepership at the Ashmolean was the amalgamation of the University Galleries with the Museum of Archaeology. Despite the move of the Ashmolean from Broad to Beaumont Street in 1894, it was not until 1908 that the two institutions formally merged in order to create the Ashmolean Museum of Art and Archaeology that we know today.17 In 1908, Arthur Evans resigned from his post as Keeper in order to give way to the new generation of scholars that were now meant to take charge of the new institution. Many tributes were paid to Evans on his retirement, including the famous 1907 portrait painted by his friend William Richmond and supported by a group of 204 subscribers. The Chancellor of the University, Lord Curzon, praised Evans’s contribution to the Ashmolean’s transformation:

“Your real monument is the Ashmolean itself, now organized and equipped on a scale that renders it absolutely unrecognizable to the Oxonian twenty five years ago, and makes it a source of pride and credit to the University.”18

Exhibiting the Aegean in Oxford

In the first guide to the Museum’s collections published in 1909 and written by David Hogarth (1862–1927), a renowned Aegean and East Mediterranean archaeologist and Evans’s successor to the keepership, one finds the following statement:

“The Aegean collections at the Ashmolean, taken as a whole, are the most generally representative possessed by any Museum. Athens has her magnificent Mycenaean and Cycladic antiquities, Candia her Cretan, Berlin her Trojan, and London her Cypriot. But Oxford is able to show both Cretan and Cycladic treasures of the first importance; to illustrate with abundant material the Bronze Age in Cyprus and the Aegean influence in Egypt; and to show typical Aegean products of both the European mainland and Asia Minor ... it is Cretan discovery which has ended the empirical stage of prehistoric archaeological research in the Aegean area, and enabled us to find the place of Aegean civilization in the story of European development.”19

Yet, the Aegean collections at the Ashmolean are amongst the most recent in the Museum’s long history. The first object of Aegean craftsmanship to arrive at the Ashmolean was a seal purchased by Greville Chester in Egypt as

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15 There was some tension between Evans and the General Pitt Rivers. The inaugural lecture of Evans and his attempt to centralize the archaeological collections agitated the General, since he felt that Evans was trying to do exactly what he was trying to achieve with his own collections. In fear of having two homes for the “development of art”, Pitt Rivers suggested that the Ashmolean should focus on the “advanced industries”, while the Pitt Rivers should concentrate on the “primitive industries”: see Larson 2008, esp. 95.
16 This process had already started almost a month prior to Evans’s appointment to the keepership (University Gazette 20 May 1884, where the transference of the archaeological objects held in the Natural History Museum, the University Galleries and the Bodleian Library to the Ashmolean was announced).
17 Evans faced tough opposition within the University and the amalgamation was resented by a number of curators in the University Galleries. According to Whiteley 1997, 629: “The study of Classical art and archaeology was strengthened by the move, but the prospects for the fine arts were not uniformly improved by the dominance of archaeologists in the administration of the museum”; also MacGregor 1997, 608–10.
18 Evans 1943, 356; also echoed in Hogarth 1920, 9: “The growth of the Ashmolean to first-rate importance as a Museum of Archaeology is due to one man more than any other, namely to Sir Arthur Evans, Keeper from 1884 to 1908”. Evans was knighted in 1911, in King George V’s coronation honours, not just for his work at Knossos but also for his work at the Ashmolean and his contribution to learning in general (Evans 1943, 366).
19 Hogarth 1909, 48–9 and 54.
a “Phoenician prism” in 1873. When Evans was appointed Keeper in 1884, only a handful of Aegean objects were part of the museum’s collections (e.g. a few obsidian blades and stone tools and utensils; a few Cycladic figurines, and between 1884 and 1892, Mycenaean pots from Biliotti’s research in Rhodes, objects from Schliemann’s work at Troy, Mycenae and Orchomenos, and the first Aegean pots from Egypt). After all, both archaeology as a discipline and Aegean prehistory as a research area were at their infancy. Evans, who was following closely developments in prehistoric archaeology in the Mediterranean, was familiar with the most important discoveries having visited the Troy exhibition in London in 1878, and having seen the Mycenaean treasures and the Schliemanns in Athens in 1883. Yet, the first recorded visit of Evans to Greece specifically in search of pre-classical antiquities was only in 1893, when he went to Athens to find out more about gems with evidence for pre-alphabetic writing. His interest in pre-alphabetic writing is said to have emerged from a seal given to the museum in 1889 by Greville Chester – and this interest led Evans to identify not one, but three different systems of writing, which he called “Cretan Hieroglyphic” or “Pictographic”, “Linear class A” and “Linear class B”.

The Athens art-dealers guided Evans to Crete – and it was there that for six years (1894–1899) he travelled extensively, acquiring numerous objects and excellent knowledge of the island. The antiquities he bought during his trips to Crete entered the Ashmolean collection as soon as 1896, the year that Evans arranged and exhibited “in the desk-case N, part of the Egyptian displays in (Antiquarium) Room I” a series of examples of “primitive Aegean scripts” that included a number of seals and the first fragment of a libation table from the Psychro Cave. This display, accompanied by explanatory labels and comparative material, along with his publications in 1894 and 1895, solidified his view on the existence of writing in pre-classical Crete.

This first modest display was radically revised following Evans’s excavations at Knossos. Just in a period of six years, between 1904 – when he was first allowed by the Cretan government to legally export antiquities – and 1909, Evans added to the museum about 3,500 objects from Knossos that now form the core of the Minoan collection at the Ashmolean. However, between 1900 and 1904 – during which time most of the palace and the nearby tombs at Knossos came to light – Evans was not able to export antiquities as there was no such provision by the 1899 law “On antiquities” of the Cretan State (1898–1913); on the contrary, the exportation of antiquities from the island was prohibited altogether (Chapter 5, Article 18).

Evans was very anxious to bring material back to England for two main reasons: firstly, to raise awareness of the Cretan Exploration Fund – that is to raise financial support for the Knossos excavations; and secondly, to justify his long absence from Oxford, at a time when he was actually entitled to 215 days of annual leave. In order to raise awareness and present his discoveries, he organized the first Minoan exhibition in 1902 in Oxford. As no objects from Knossos were yet available, Evans displayed the antiquities which he had bought during his Cretan travels and numerous casts, including a cast of the gypsum throne which he displayed alongside drawings, plans

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20 A haematite amygdaloid seal with a standing lion with a shaft sticking in its back (AN1873.129, CMS VI.2, no. 346). It was only later that Furtwängler identified this seal as Mycenaean (Furtwängler 1900, 51, n. 2).
21 For an assessment of Evans’s keepership, see Ovenell 1986, 250–64.
22 The term “Aegean” was first applied to a class of Bronze Age pots from this region by Flinders Petrie while excavating in Egypt: Petrie 1969, 108; see also Evans 1921, 266; Phillips 2006.
23 For the impact of archaeology on the display of “classical antiquities”, see the excellent article by Beard 2012 who argues in favour of a shift between two different regimes of museum displays and “ways of seeing” in the course of the 19th century – one focusing on the history of the objects through their donors; and the other on archaeological typology, context, and provenance.
24 Evans 1943, 207 and 263. His fascination with Schliemann’s discoveries can also be seen in his inaugural lecture in Oxford, where the excavations at Troy, Mycenae, Tiryns and Orchomenos were prominently noted (Evans 1884a); see also Evans in Ludwig 1931, 20.
25 A four-sided agate prism with Cretan Hieroglyphic signs on all sides (AN1889.998, CMS VI.1, no. 104). For the inspiration it is said to have provided to Evans, see Evans 1909, 8–9. See also Brown 2001, xxii–xxiii and Evans 1943, 309; they both place emphasis in the formative years between 1883 and 1893 in Evans’s life. See now Galanakis 2014 for a reinterpretation.
28 Evans 1894, 1895. In 1895 Evans saw a baked tablet, said to have been found at Makryteichos and most likely coming from Ka-
29 lokairinos’s excavations at Knossos. This tablet, inscribed in what Evans would later classify as “Linear class B” script, was copied in Athens in 1883.
30 Evans (1884a, 17) had already expressed in his inaugural lecture that if the original object was not available, then “it is surely of infinite advantage to have before our eyes at least the reproduction”. On the 1902 exhibition see Nature (16 October 1902), 623 and Keeper’s Report (Ashmolean Museum), 1902, 1 and 5.
and photos of the Knossos excavations. The Oxford exhibition in October 1902 coincided with the tercentenary celebrations of the Bodleian Library and served, most likely, as a testbed for the slightly enlarged show in London a couple of months later.

The Cretan Exhibition, 1903

The 1903 Knossos display at the Royal Academy of Arts was meant to be a side-show to the Academy’s winter exhibition of the “Old Masters” with paintings by Turner, Constable, Rubens, Rembrandt and so forth. Yet, the London show received wide publicity and came to be known as the “Cretan exhibition”. From reports in the press of the time we learn that it displayed an illustrative collection of casts, drawings, photos and plans of Evans’s excavations at Knossos and a few drawings of pots and other objects from the British excavations at Psychro and Zakros.32

“Indeed the greatest care has been taken to set before us, by the use of general views as well as orthographic drawings the actual state of the present stage of excavations.”33

Despite the lack of “original” objects and being only a side-show to a main event, London’s Cretan show was enthusiastically received in the press: “great attraction”, “absorbing”, “amazing”, “astonishingly beautiful” were some of the press reviews.34 As one newspaper wrote “it is like a fairy tale, to be shown the ground plan of the famous labyrinth of Minos”.35 Another commented: “What ancient works had greater claims to be associated with the Old Masters of Europe than those which came from the School of Daedalus – the father of Greek art – the Benvenuto Celini of the court of Minos”;36 an art magazine remarked that among the many astounding surprises in this remarkable exhibition, the most astonishing was the Knossian pottery: “… L’Art Nouveau, in its latest and most perfect state, an ordinary matter three or four thousand years ago.”37 While most newspaper reviews heralded the discovery of the “first European civilization”, a few decided to focus on the modern aspects of Knossos – in particular, one reviewer wrote:

“The modernisms of Knossos are not exhausted by the mention of nineteenth-century staircases and thirteenth-century Gothic thrones, nor even by an allusion to the very elaborate and scientific system of drainage and sanitation … in the figurines of goddesses and copies of wall paintings, Knossos comes to the rescue of modern woman and her argument.”38

Criticisms were rare: Hogarth, Evans’s colleague, pointed out in his review that some of the photographs have been “hung too high”,39 while The Builder of 31 January 1903, in its otherwise dithyrambic review, commented that “one small regret may perhaps be expressed – the regret that in the admirable photographs scarcely any human figures are introduced to give an indication of scale.”40

From this rather sketchy summary of reviews, it becomes clear that several issues that scholars have dealt with in the last twenty years with regard to the history of Minoan scholarship, such as modernism, art nouveau, feminism,

32 Evans 1903.
33 The Builder (31 January 1903); Evans (1903, 51) explained that “the general arrangement adopted has been to place illustrations of the Western half of the Palace on the Left side, and those of the Eastern half on the Right.”
34 E.g. Review of Reviews (March 1903); Antiquary 39 (February 1903); The Speaker (21 February 1903); The Illustrated London News (17 January 1903); The Athenaeum (31 January 1903); Globe (13 February 1903); Magazine of Art 1 (January 1903); Magazine of Art 2 (January 1904); Monthly Review (March 1903); Academis and Literature 1604 (31 January 1903), esp. 107: “But, in deference to the astonished and delighted expert, it has been arranged that until the close of the winter exhibition we are to see this collection, of such interest to the archaeologist, the artist, the historian, the ethnologist, the biologist, and, indeed, everyone whom Crete was the stepping-stone by which Civilization passed from Asia to Europe, from Egypt to Greece.”
35 The Observer (11 January 1903); The Architect & Contract Reporter (9 January 1903); The Times (31 December 1902) and (16 February 1903). The Nation (30 July 1903) mentions the summer show of fine Greek art, mostly coins and gems, the majority of which came from the collection of Evans (221 pieces, including engraved gems of the “Mycenaean era”).
36 Globe (13 February 1903); in the same article and in reference to the petition of the Cretan Exploration Fund the author remarked: “Why not organize a Minoan bazaar? The cause is good and the costumes are pretty.”
37 Magazine of Art 2 (January 1904).
38 The Builder (31 January 1903); also The Speaker (3 January 1903), esp. 369: “primitive though they may be, these Cretan frescoes strike a European note. The court of Minos must have been rather a club of gay gentle-fool than the suite of some Eastern tyrant”.
39 Hogarth 1903, 322.
40 The Builder (31 January 1903).
and Crete as a source of myths, legends and of European civilization as a whole, were disseminating widely through the press, as early as 1902–1903 following Evans’s excavations on Crete – and this might have been the main source of “Cretan” inspiration for a number of artists and writers. Art, and especially the paintings, appears to have constituted the main focus of attention for the press of the time, closely followed by the legends of Crete and the “modernisms” of Knossos: for example, Theseus, the Minotaur and the labyrinth; the possible prominent role of women; the drainage and sanitation at the palace; and, perhaps somewhat surprisingly less widely advertised in the London show, the existence of the “earliest European writing”.

Although Evans did not succeed in raising a huge amount of money from the London show, he was nevertheless successful in sparking popular imagination, not least by using the press as a platform for promoting his discoveries, which were occasionally sensationalised – something not dissimilar to the relationship of media and archaeology even today. From a public point of view, the show was extended for a month and a half (from January to March 14), probably both because of its success and also of raising more money for the Cretan Exploration Fund. The use of replicas produced specifically for the 1902 and 1903 exhibitions proved not only an ideal means of displaying the Cretan past in temporary displays, but also in permanent exhibitions, at the Ashmolean – after all a University Museum – and Knossos itself.

As a result of these exhibitions the Aegean objects at the Ashmolean acquired for the first time a dedicated display space at the end of 1903. From an enclave among the Egyptian antiquities, they were now displayed in new cases in such a way “as to facilitate the methodological grouping of these collections.” The Ashmolean displays were re-arranged several times by Evans, often with the help of Duncan Mackenzie, his chief archaeologist at Knossos – either because of the arrival of new objects or, as in 1905, because of Evans’s “method for classifying the successive periods of Minoan art”. The objects and displays at the Ashmolean became for Evans a testbed for his theories and interpretations. And despite the arrival of numerous objects from Crete, Evans continued to commission new casts and replicas, which he valued highly for their didactic aspect.

Casts still occupy a specialized, but rather useful educational niche, especially in the teaching of ancient sculpture and in their own right as collectables. Yet, outside the designated cast galleries, they have now become increasingly marginal in “proper” museum displays, often hidden away in storerooms. Aegean casts and in particular replicas became rather trendy, following the discoveries of Schliemann and Evans, and the production – already from the 1890s – of electrotype replicas of metal objects, copies of frescoes and of clay vessels as well as other classes of objects by the Gilliérons, father and son. Several museums across Europe and the USA, including the Ashmolean in Oxford, the Metropolitan Museum of Art in New York, the British Museum in London, the Fitzwilliam Museum in Cambridge, the Classical Museum of the University College in Dublin, the Liverpool Museum, and museums in France, Belgium and Germany (to name but the most notable cases), had between 1900 and

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41 See most recently Hamilakis 2002; Darque et al. 2006; Hamilakis and Momigliano 2006; Ziolkowski 2008; Gere 2009.
42 By mid-February £850 had been raised according to The Times (16 February 1903, 12) out of the original minimum of £1,500 estimated to carry out the season’s excavations. From Mackenzie’s accounts for the Knossos costs (A.J. Evans Archive, Ashmolean Museum), we are informed that the total cost for 1903 amounted to 32,123,50dr or ca. £1,285. There were ideas for more exhibitions – for example, Theseus, the Minotaur and the labyrinth; the possible prominent role of women; the drainage and sanitation at the palace; and, perhaps somewhat surprisingly less widely advertised in the London show, the existence of the “earliest European writing”.
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44 Keeper’s Report (Ashmolean Museum), 1903, 1.
45 Keeper’s Report (Ashmolean Museum), 1904, 1–2; Evans 1905, 1906.
46 Outside the Knossian and Cretan antiquities, the most important acquisition for the Museum by Evans was part of an assemblage of Middle Minoan pots found in a tomb at Abydos in Egypt which offered at the time “the most definite datum yet obtained for the relative chronology of the Middle Minoan period in Crete”. Keeper’s Report (Ashmolean Museum), 1907, 3.
47 For the shifting attitudes to the collection and display of casts see Frederiksen and Marchand 2010. Mycenaean’s Lion Gate was the first Bronze Age cast to be included in the Oxford Cast Gallery (1894).
48 Many of Evans’s replicas were removed from the Ashmolean displays between 1951 and 1983. Recognizing their role in the history of Aegean archaeology, they are, since 1983, back on display. A number of exhibitions have been organized on the Gilliéron replicas: Stürmer 1994; Haywood 2000; also in 2010 at the Museo Nacional de Bellas Artes in Havana, Cuba in collaboration with the Winckelmann Institute of the University of Berlin and most recently at the Metropolitan Museum of Art (Historic Images of the Greek Bronze Age: The Reproductions of E. Gilliéron & Son, 17/5/2011–17/6/2012); see also Haywood 2003. On Aegean replicas in particular, see Sherratt (unpublished).
Yannis Galanakis

WW II among their collection of Aegean objects numerous Minoan and Mycenaean replicas. These objects had an instructive role and played an important part in university archaeological teaching throughout Europe.

This educational and instructive aspect of replicas can be seen in their popularity in pre-WW II museum displays and university archaeological collections, as well as in two letters from Paul Perdrizet (1870–1938), Professor of Archaeology in the University of Nancy, to Arthur Evans. Perdrizet, writing in 1902, explains to Evans that in his lectures he is using visual material “formed not (alas!) of originals, but of photographs, projection slides, postcards, plans, books, impressions, engravings and casts.” The reason he is writing to Evans is to ask for some replicas of his most spectacular Knossos objects, reassuring him that the University of Nancy would cover the expenses and that nobody will use the casts for any other purpose than teaching, clearly stating that no one will publish the replicas (“aucun ne serait publié ni par moi, ni par aucun de mes auditeurs”); quite a remarkable comment by our “modern” standards of archaeological publication.

All in all casts and replicas, the latter both enhanced and actual copies of the original objects, held an extremely important place in pre-WW II Europe and the USA. For Evans in particular, as Susan Sherratt has observed, “they represented in a peculiar way a kind of return to the sort of lifestyle aspects which can be associated with aristocratic copies of classical sculpture in the 17th and 18th centuries – but with the much more idiosyncratic difference that in his case they offered a logical extension of the also largely replica, play-acting world which he had set out to recreate out of his excavations.” Replicas suited Evans’s desire to reconstitute and redecorate the palace at Knossos as well as “to people it once more with living beings whose ways of thought he also believed could be restored and understood”.

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50 28/12/1902 and 13/03/1903 (Arthur Evans Archive, Ashmolean Museum).
51 Sherratt (unpublished).
Oxford to Knossos: “A site so that it is a gain for the spectator”

Despite his retirement in 1908, following the official amalgamation of the Museum of Archaeology with the University Picture Galleries, Evans remained involved with the Ashmolean throughout his life, re-arranging the Aegean gallery several times (fig. 1).\(^{53}\) As part of my work at the Ashmolean between 2007 and 2012, I developed an interest in understanding to what extent Evans’s work in the museum and the exhibitions he organized may have influenced his work at Knossos, especially the extensive and often controversial restorations.

Andreas Lapourtas was among the first to clearly draw attention to Evans’s museum experience and to point out Evans’s desire to mount a permanent exhibition of Minoan culture at Knossos.\(^{54}\) It is indeed possible to argue that one of the ways to approach and understand Evans’s extensive restorations at the site is from his effort to create an open-air museum – a permanent exhibition of Knossos at its heyday, comprehensible to the visitor. After all, one of the ways to approach and understand Evans’s extensive restorations at the site is from his effort to create an open-air museum – a permanent exhibition of Knossos at its heyday, comprehensible to the visitor. After all, his half-sister Joan Evans wrote in her memoirs of Arthur that he had a didactic streak in his nature to make the “civilization (he had discovered) … intelligible to other men.”\(^{55}\) Can this indeed be the case?

Before attempting an answer it would be worth looking briefly at the work of reconstitution, as Evans called the work of reconstruction at the palace. Knossos went through at least four major phases of restoration.\(^{56}\) The first two, before WW I and supervised by the architects Theodore Fyfe and Christian Doll, were either moderate – to protect the ruins from the elements and thus largely non-obtrusive – or largely successful in reconstructing the ancient building, as in the case of the Grand Staircase.\(^{57}\) During this period, and just a few months after the London exhibition and the Ashmolean redisplay, Evans created a reference museum above the throne room,\(^{58}\) which eventually, and after several phases of “reconstitution”, became a loggia and a picture gallery for the recreated frescoes.\(^{59}\)

By that time and despite the relatively small scale of these early interventions and restorations, Evans became the recipient of criticism, not least because of the expenses involved. David Hogarth expressed his discontent about the “princely way things are done” at Knossos which actually hampered significantly the process of raising money in support of the excavations:

> “These expensive methods are yours in digging, as in collecting and in ordinary life. You are a rich man’s son, and have probably never been at a loss for money.”\(^{60}\)

Despite the criticism, Hogarth, in the same letter to Evans, recognized advantages in the expensive approach:

> “If you spend much more in proportion to [Flinders] Petrie, you produce far worthier results in published form, and one feels that nothing has been spared to obtain expert accuracy. One can’t feel that with Petrie’s roughly drawn plans and illustrations; nor again does he leave a site so that it is a gain for the spectator.”\(^{61}\)

“A site so that it is a gain for the spectator” was already taking shape when Hogarth wrote this letter to Evans in 1902. But, from these moderate, yet expensive, early restorations, Evans decided to implement an even more expensive and radical intervention. When Evans revisited Knossos after the war, he found crumbling walls and the palace in a general state of disrepair. The experience of earthquakes on Crete, especially that of 26 June 1926,
when numerous objects were destroyed in the Herakleion museum, appear to have convinced Evans to finalise his drastic, yet successful as he thought, reconstitution using, now more extensively, reinforced concrete.  

There are two ways of interpreting the transformation of the palace. There are reasons to believe, as several scholars have done in the past, that Evans was afraid that his legacy would not survive and the best way to maintain it was by consolidating the ruins – some sort of a Victorian vanity project. At the same time, it has to be stressed that a series of events paved the way for the materialization of his vision to turn Knossos into an archaeological open-air museum: in 1908, following the deaths of his father and cousin, Evans came into the possession of a large fortune that allowed him to live a good life but also invest at Knossos. His work at the Aegean gallery at the Ashmolean and especially the preparation of the voluminous Palace of Minos (the first volume of which finally appeared in 1921) helped him to refine further his ideas and interpretations about Knossos. His public lectures alongside the use of casts and replicas helped Evans shape his vision of the Minoan past. Characteristic examples are the colourful romantic drawings commissioned for the publication of the Palace of Minos, which subsequently became the blueprint for the actual restorations at the site.  

These restorations, especially due to their extent, created a fervent debate and became a matter of controversy already in the 1920s with some people expressing awe and admiration for the work carried out at Knossos, and others, including numerous archaeologists, criticising their scale and necessity. For example, John Pendlebury, Knossos curator between 1929 and 1934, was frustrated by Evans’s pace of restoration to the extent that before the excavation of the Temple Tomb was completed in 1931, Evans had already imposed his interpretation on it as the “tomb of Minos” and immediately began the restoration of the structure as such “really playing about with the tomb in an abominable way”. In his defence, Evans remarked in the introduction to Pendlebury’s Knossos guidebook:

“In the works of reconstitution, which here so necessarily followed that of the spade, the object of affording an intelligible picture to the visitor has been constantly kept in view.”

Although Evans was advised throughout the work of reconstruction by his architects – and one should not overlook their important contribution in shaping Knossos – and despite efforts to distinguish the actual ruins from the restorations, the extensive rebuilding along with the use of replicas (another costly undertaking), soon blended into one form. This confusion on part of the visitors was not limited to the site of Knossos – for example, in 1924 David Hogarth decided to change the colour of the labels used for replicas at the Ashmolean Museum in order to distinguish them from the original objects following the visitors and students’ increasing confusion.

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62 Kienzle 1998, 296; concrete at Knossos was first used as part of Doll’s restorations at the site. It is also worth mentioning that earthquakes provided Evans with an interpretation for the destruction of the palace both in 1600 and 1400 BC. This idea appears to have developed in 1922 (Evans 1922, 327). With the 1926 earthquake (about 7.4 in the Richter scale according to Ambraseys and Adams 1998), earthquakes as an explanation for the destruction(s) of Knossos acquired more prominence in Evans’s writings (for the latter, see Evans 1943, 381–83; A.J. Evans Archive, Ashmolean Museum, Newspaper Cuttings, book 7, 48–68). On Evans’s defence of his work at Knossos, see also Fyfe 1926 and Evans (1930, xii): “It is with special satisfaction that I am able to record that the strength and stability ensured to the reconstituted structures by the use of this new method has enabled them to resist with complete success the fresh severe shock of earthquake that took place in February of this year.”


64 Evans 1943, 354–55.

65 One of the earliest romantic watercolour drawings was the “Throne Room” by E.J. Lambert in 1917. Soon more followed, such as the colour reconstructions of the “Hall of the Double Axes” and the “Queen’s Megaron” by E. Gilliéron, presented by him in Pendlebury’s Knossos, which subsequently appeared in volume III of the Palace of Minos in 1931. Some very intriguing drawings were published by Fritz Krischen (1921) illustrating a festive day at the court of Minos (I would like to thank Prof. J. Driessen for his reference to the drawings of Krischen). Another set of romantic watercolour reconstructions were commissioned by N. Platon on behalf of the Herakleion Museum and were drawn by Piet de Jong in the 1950s.

66 For a summary of these views, see Lapourtas 1997; MacGillivray 2000; Gere 2009; also references in Hamilakis and Momigliano 2005.

67 Grundon 2007, 143.

68 Evans in Pendlebury 1933, 5; cf. Evans 1904–1905, 26: “as a whole the effect of this legitimate process of reconstitution is such that it must appeal to the historic sense of the most unimaginative.”

69 Kienzle 1998 is the best critical study on Evans’s restorations at the site. A conservation project on the palace at Knossos by the Ministry of Culture of Greece included the restoration of Evans’s interventions and took ten painstaking years to complete (Minos 2008). Although Evans failed to create a unified archaeological park, one of the aims of the recent restoration project was to look at ways in which this park can be materialized in the near future; see also Papadopoulos 1997, 2005.

70 Keeper’s Report (Ashmolean Museum), 1924, 4 and 11, “it is now much easier for the student to distinguish originals”. It goes without saying that this change underlines the shifting attitudes towards “replicas” and “originals”, and for that matter the nature and extent
Back to Exhibitions

After his retirement, Evans’s time was predominantly spent with his work at Knossos (excavation and restoration), the publication of the *Palace of Minos* (a true publisher’s feat with six volumes and an index, 3,108 pages and 2,433 text images in total), the several re-arrangements of the Aegean gallery at the Ashmolean, and his political activism. Outside the Ashmolean, he organized two more exhibitions with Cretan antiquities. In 1926, he put on display part of his own personal collection and that of his father in three rooms under marquees in his house at Boar’s Hill near Oxford on the occasion of the meeting of the British Association for the Advancement of Science (4–11 August), attended by 850 delegates.\(^7^1\) This exhibition, best described as a Victorian *conversazione*, was aimed at the specialist with several trays of sherds and small finds on display along with coloured plates of objects and frescoes, mostly deriving from the publication of the *Palace of Minos*,\(^7^2\) all clearly directed to impress a scholarly audience (fig. 2).\(^7^3\)

It was only after the completion of the restoration work at the palace and the publication of the *Palace of Minos* that Evans decided to organize another major Cretan show – the Minoan room,\(^7^4\) part of an exhibition at the Royal Academy of Arts to celebrate the 50th anniversary of the British School at Athens.\(^7^5\)

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\(^7^1\) Evans 1943, 384.

\(^7^2\) I would like to thank Lucinda Douglas-Menzies for providing me with photos of the 1926 Youlbury exhibition and for granting permission to publish the one shown here.

\(^7^3\) The exhibition was only briefly mentioned in the press: *e.g.* *The Times* (10 August 1926).

\(^7^4\) He was assisted by Mercy Money-Coutts, Doreen Dunbabin and Helen Waterhouse.

\(^7^5\) Myres 1936, esp. 5–33. For more details on “Knossos in London” and the 1936 exhibition, see Baker 2013, 164–77.
The Minoan room is the best documented exhibition organized by Evans (at that time age 85), both in terms of the surviving visual record and the accompanying textual documentation (figs. 3–4). The 1936 exhibition encapsulates Evans’s understanding of Knossos and Minoan Crete. Themes included: styles of pottery; relations between Crete and Egypt and Syria; the principal “religious conceptions and observances of the Minoan people”; seals and signets and a table case on the undeciphered Minoan systems of writing. It was this display, for example, that most struck the 14-year old Michael Ventris, who 16 years later astounded the world by deciphering Linear B. Most objects for this exhibition came from the Ashmolean (more than 200, without counting the numerous sherds) and a number of other museums and individuals (e.g. the Louvre, the Fitzwilliam, Eton college and the personal collections of Evans, C.L. Woolley and E.G. Spencer-Churchill). The displays followed clearly the narrative of the Palace of Minos, and showed all stages of development culminating in the “palace style”, which was cut short by the earthquake (as Evans thought) that destroyed the palace of Knossos at about 1400 BC. The labels, most of which are still preserved at the Ashmolean, were taken from Evans’s numerous publications, while drawings, plans, diagrams, reconstructions, replicas and numerous photos provided the necessary visual props for the visitors to experience what one newspaper review called “Minos in Piccadilly”. The painted cast of the “charging bull” relief fresco specifically commissioned by Evans for the 1936 exhibition became the pièce de la résistance in the London show (fig. 3).

The 1936 Minoan Room at Burlington House underlines further Evans’s attempt to create a visitor’s experience in his exhibitions, whether temporary or more permanent, in England and at Knossos itself; “a gain for the spectator” (1902) and an approach that affords an “intelligible picture to the visitor” (1931), as already mentioned.

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76 Many of the “visual aids” used in this exhibition are still preserved in the A.J. Evans Archive (Ashmolean Museum).
77 The Times (14 October 1936); Wace 1936; Evans 1936a, 1936b; Woolley 1936.

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Exhibiting the Minoan Past

above. This approach is not dissimilar to what many European museums were trying to achieve in the second half of the 19th century within their exhibition rooms, by reconstructing an ancient setting in which to display their objects: from the time of the 1851 Great Exhibition in London to the Egyptian rooms of the Neues Museum in Berlin and the Kunsthistorisches Museum in Vienna, the Etruscan Room at the Museo Civico Archeologico of Bologna, and beyond. In this respect, Evans’s museum and exhibition approach appears to have been largely informed by the Victorian instructive display of the past which soon became popular in Europe and to some extent in the USA.

In this respect, Evans’s museum and exhibition approach appears to have been largely informed by the Victorian instructive display of the past which soon became popular in Europe and to some extent in the USA.

After the 1936 London exhibition, Evans, who had been giving objects to the Ashmolean throughout his life, gave most of his Minoan collection to the museum. This necessitated the rearrangement of the Minoan Room which Evans undertook between 1937 and 1939. This room stayed unchanged until 1951 and formed the permanent display of Aegean art and archaeology at the Ashmolean. Since then the Aegean collections have undergone several redispays with the most recent in 2009, following the Ashmolean’s major redevelopment.

Concluding Remarks: Evans as Curator of Exhibitions

To what extent then did Evans’s role as curator inform his work at Knossos? Any attempt to understand Evans’s excavations and especially his restorations at Knossos should take into account his efforts to present the site and his work to the public; it should also acknowledge the use of replicas as well as the organization of temporary and permanent exhibitions. As I have tried to argue, his interest in transforming Knossos might have developed alongside his work at the Ashmolean, which he managed to turn into a first-rate museum of archaeology. The museum suited his antiquarian interests – Evans was primarily a field collector and anthropologist of the Victorian era; not a field archaeologist by our modern standards. One of his main duties at the museum was to acquire and display antiquities, and this aspect suited his tastes and guided his life until his death in 1941. His personal collections were not limited to Cretan or even Greek antiquities. He had an extensive collection of gems, coins and medals and he never lost an interest in British or European antiquities – an interest he owed to his father. His experience with objects, as collector and curator, informed and at the same time helped shape his attitude towards the preservation of antiquities.

Cf. Evans’s notes on the excavation notebooks, often illustrated with beautiful drawings, but rarely with sufficient contextual data.

This approach to exhibitions stemmed from the 1851 Great Exhibition in London (e.g. the Pompeii display: Hales 2006). For a link between Pompeii and Evans’s restorations at Knossos, see Lapourtas 1997. Although motifs ornamented some of the rooms of the major Greek museums (e.g. the National Archaeological Museum at Athens), visual aids in Greece and Crete between 1900 and WW II were limited (Chournouziadí 2006, 40–60).

This display strategy was most likely inspired by earlier approaches to the presentation of “archaeological discoveries” (as opposed to the antiquarian cabinets): e.g. the reconstructed entrance Hall of the tomb of Seti I, exhibited by G. Belzoni at the Egyptian Hall at Piccadilly in 1821–1822 or John Soane’s House-Museum in London. See MacGregor 2007, 237–97, esp. 281–9. For a somewhat extreme example, see the Harris Museum, Art Gallery & Preston Free Public Library, which opened in 1893 with extravagant decoration. The Harris Museum predominantly displayed casts of ancient objects. One can list the Getty Villa at Malibu, built in 1954, among the museums that aimed, at a much later stage, to create a “visitor’s experience” through the recreation of ancient architecture, the use of intricate external and internal decoration, and the population of the museum space with ancient (mostly intact or restored and aesthetically pleasing) objects.
and presentation of Knossos to the public – a preoccupation, as I hope to have made clear, that was quite apparent already from the first years of his work at the site.

Although we often approach Evans from his archaeological work at Knossos, we should perhaps start to approach him also from his work at the museum which seems to have informed considerably his attempts to publicise his theories and interpretations. His instructive and didactic approach to material culture was very much combined with his field collector’s attitude to anthropology and archaeology and his experience in a University museum environment. His financial means allowed him to go beyond moderate restorations materialising and consolidating for ever his vision of Minoan Crete both in museum exhibitions and, in a literally concrete form, at the open-air museum of Knossos (often with the extensive use of casts). As Peter Kienzle remarked in his excellent study on the conservation and restoration of the palace, Evans “understood both the need for conservation and the need for presentation”.

Exhibitions constituted only one aspect in the dissemination of knowledge: public and academic lectures, tours and social events, articles in newspapers and magazines were other ways in which Evans filtered his work, becoming the most prolific and influential figure in Cretan archaeology. Although his exhibitions have long been taken down, Knossos and the voluminous Palace of Minos remain – with all their controversies – constant reminders of Evans’s ideas, methods and practices regarding the curation and presentation of the past in the present.

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81 It is worth noting here a reviewer’s remark on the first volume of the Palace of Minos in The Burlington Magazine (May 1922), 314: “though much can be explained by illustrations and much more by coloured plates, could we but have them by the hundred, it is essential for the intensive student to familiarize himself with actual examples of the pots themselves (as in certain museums, notably the Ashmolean, is possible) before the sequence of types will root itself firmly in his mind.”

82 Kienzle 1998, 1, 449.
Bibliography


**Newspaper reports:**


Data in Progress

*Exploring the Cretan Land- and Cityscape*
The following paper examines the Bronze Age settlement history of Chryssi, a small island located along the southeast coast of Crete. Excavations carried out by the 24th Ephorate on the island in 2008 and fieldwork conducted by the author demonstrated how Chryssi, today a marginal landscape, was extensively exploited for its natural resources since the Final Neolithic period. The density of sites recorded on the island corresponded to periods of wealth and prosperity on the opposite coast, along the southern Ierapetra Isthmus (i.e. Protopalatial, Neopalatial). A similar pattern was observed on other offshore islands around Crete (Gavdos, Pseira, Kouphonisi) that were most likely tightly connected to large administrative sites on “mainland” Crete. Hence, Chryssi presented a unique opportunity to study not only the large-scale exploitation of a Bronze Age landscape, but also to place this research within a broader network of island archaeology and maritime connectivity in the eastern Mediterranean.

Introduction

During the past decades, numerous archaeological projects along the North Coast of the Ierapetra Isthmus have yielded substantial evidence for the Bronze Age settlement history of the Mirabello Bay while the southern part of the Isthmus has remained largely unexplored. Rescue excavations that produced limited evidence for Bronze Age settlement patterns of the south Ierapetra Isthmus took place throughout the 20th century at the sites of Hagia Photia, Episkopi, Myrtos, and more recently at Arapi Skala, Kalamafka, Bramiana, and Gaidourophas. Brief archaeological surveys in the area have presented interesting results regarding the FN/EM I and LM IIIC settlement patterns of the Ierapetra region.

The initial goal of my dissertation research in 2006 was to catalogue sites and document the settlement history of the Ierapetra region from the Bronze Age until the Roman period. After two seasons of archaeological and topographical survey in the area it became clear that cataloguing the various sites was nearly impossible due to dramatic landscape transformation around Ierapetra.

Natural formation processes and modern land use have transformed the landscape around Ierapetra since the Bronze Age. Contemporary agricultural practices, especially greenhouse agriculture, dominate the coastal plain west and north of the town. An area of approximately 8,000,000 m² around Ierapetra has been covered by greenhouses, affecting our understanding and interpretation of past human events in the region. In addition, the modern town of Ierapetra and the nearby villages are rapidly growing and expanding, threatening a number of archaeological sites in close proximity.

Chryssi Island is located only eight nautical miles south of Ierapetra and was therefore considered ideal in studying the “colonization” of an undisturbed islandscape and the way in which it was transformed and exploited

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1 This article is the result of fieldwork on the island of Chryssi as part of my Ph.D. dissertation at the Ruprecht-Karls University in Heidelberg. I would like to thank V. Apostolakou, former director of the 24th Ephorate, for allowing me to study the settlement patterns of Chryssi Island as part of the ongoing excavations there. I am also grateful to P.P. Betancourt, T. Brogan, and my advisors Diamantis Panagiotopoulo and Donald Haggis for their constant support and guidance throughout this project. Ariel Pearce-Chalikias, Doug Faulmann, and Nikos Chalikias helped tremendously during the survey of the island. Doug Faulmann and Gianluca Cantoro designed many of the maps and instructed me on how to use the DGPS.


Chryssi Island throughout antiquity.\(^5\) Moreover, Chryssi, an insular environment at the periphery of Crete, was seen as an extension of the socio-political and economic systems that shaped the opposite coast, a type of offshore-island archaeology that informed us about settlement developments on “mainland” Crete. Recent excavations by the 24th Ephorate on Chryssi Island uncovered the substantial remains of a Neopalatial harbor settlement that was specialized in the production of purple dye. Moreover, archaeological fieldwork on the island produced a large number of sites that date from the Neolithic until the Venetian period and reflect the diachronic changes and processes in settlement patterns that occurred along the south part of the Ierapetra Isthmus.

**The Physical Landscape of Chryssi Island**

Chryssi Island is almost 5 km long from east to west, about 1 km wide in the western part of the island and approximately 200 m wide at its narrowest point (fig. 1). The island covers an area of roughly 6 km\(^2\) or 630.65 ha. Its highest point, 31 m asl, is located on the steep Kephala hill along the eastern part of the island.\(^6\) The western part of Chryssi has its highest point at about 30 m asl. The geology of the island consists of lysch deposits mixed with volcanic rocks that can be mainly found on the eastern and western part of Chryssi.\(^7\) The climate on the island is similar to the conditions found in the town of Ierapetra.\(^8\) The rainy season is usually between October and April. Fresh water is almost nonexistent on the island and there are no natural springs or watersheds. Seven wells, dug by the locals, used to supply the agricultural fields and the animal herds across the island with water. Chryssi, and more specifically the central part of the island, is covered by sand dunes, shrub vegetation and juniper trees. Vegetation on the island consists of phrygana (garrigue vegetation) and dense concentrations of juniper trees (*juniperus phoenicea, j. macrocarpa, oxycedrus*), that can reach a height of up to 5 m mostly along the central and northeastern part of the island.\(^9\) The western half of Chryssi is covered with maquis vegetation and juniper trees (*juniperus macrocarpa, oxycedrus*) as well. Chryssi Island is connected to Ierapetra by boat only during the summer time. The island was used until recently by fishermen, farmers and shepherds, and is still visited during

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5 On the archaeological survey on Chryssi, see Chalikias 2013a.
6 Paragamian 2000, 7.
8 [http://penteli.meteo.gr/stations/ierapetra/](http://penteli.meteo.gr/stations/ierapetra/)
the summer months by tourists and campers. The island has no infrastructure or modern settlements. The only buildings on Chryssi are two tavernas, two houses at Spilios harbor, a chapel dedicated to Hagios Nikolaos and several temporary huts used by fishermen and campers.

**Recording Past Human Activity on Chryssi Island**

The aim of the fieldwork on Chryssi Island was to catalogue archaeological sites and study concentrations of artifacts and architectural remains in order to draw conclusions about the periods of occupation on the island. No pottery or other artifacts (stone tools, obsidian) were collected during the fieldwork. Drawings and photo-documentation of diagnostic sherds, carried out on site, provided information about the date and sometimes the function of a site. The project was designed as a topographical survey with the extensive use of GIS technology. During the fieldwork, the use of differential GPS was essential for more accurate and detailed mapping and recording of the sites and their architectural remains. Additionally, aerial photos taken by G. Cantoro in 2008 were used in order to study the location of harbors, modern field paths, as well as temporary makeshift huts and shelters on the island. Moreover, these detailed aerial photographs have given us valuable insight into the natural landscape of the island, including geological formations, the location of sand dunes, and the distribution of vegetation.

**The Final Neolithic Period**

Two Final Neolithic sites were recorded on Chryssi (fig. 1). The largest one is located on a small promontory along the northern coast of the island near Belegrina Bay (site 9). architectural remains and pottery cover an area of approximately 40 m E–W x 60 m N–S. The pottery is badly eroded and consists mainly of red coarse ware fabrics similar to those found at Final Neolithic sites on the southern part of the Ierapetra Isthmus. Final Neolithic pottery has also been reported on the southeast slope of the Kephala hill on the eastern side of the island (site 17). The character of the Final Neolithic sites on Chryssi Island remains unknown, and it must be studied in relation to the changes in settlement patterns that occurred at the same time on the opposite coast. Final Neolithic settlements along the south Ierapetra Isthmus are generally located at naturally defensible places, such as Vainia Stavromenos, Koutsounari Karphi, Anatoli Pandotinou Korphi, Anatoli Schistra, and Myrtos Charakas. Final Neolithic settlements on small islands around Crete are known from Kouphonisi, Pseira, Gavdos, and Dia. It is possible that these islands were “colonized” and exploited for certain natural resources as early as the Final Neolithic period. Chryssi was probably used for small-scale farming, pastoral activities, fishing, and the exploitation of chert outcrops that can be found in the western part of the island. Even though such a hypothesis has not yet been confirmed through excavation, chert appears to have been a valuable commodity for some Final Neolithic communities in East Crete. The lack of arable land and water resources on remote and almost deserted islands such as Chryssi could not support substantial population groups for a long period of time, and these circumstances made small islands around Crete dependent on the settlements of the “mainland”.

**The Early Minoan Period**

Evidence for Early Minoan activity on Chryssi comes primarily from the western part of the island and the Late Minoan I site (site 1). According to Philip Betancourt a very small number of sherds dating to the EM I–III periods were identified during the pottery study. The sherds were found mixed with Neopalatial pottery. The scarce evidence from the Neopalatial settlement suggests small-scale activity in the area during the Early Bronze Age. The location must have been chosen for its small and protected anchorage as well as the easy access to the arable

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10 For the use of the DGPS in East Crete, see Faulmann and Stamos 2009, 1–3.
11 See also Nowicki 2008a, 217–20.
14 Nowicki 2008a, 219; Betancourt and Davaras 2003, 2, 131–32; 2005; Kopaka 2000, 73; 2011; Pendlebury 1939, 45.
15 Haggis et al. 2007b, 682–87.
16 P.P. Betancourt, pers. comm.
land in the western part of the island. Chryssi must have been occupied or seasonally visited during the Early Minoan period judging from the pottery found in the LM I settlement and the sparse ceramic material that was found scattered across the west part of the island (sites 7, 25 and 26).

A small amount of EM I pottery was recorded at site 17, which is located along the southeast slope of the Kephala hill in the eastern part of Chryssi. Later settlement activity in the area may have obscured earlier habitation layers. The location of the site was probably chosen for its proximity to the small, protected bay that is located right across from the island of Mikronisi as well as the sparse arable land along the southern slope of the Kephala hill. The site’s prime location is confirmed by its almost continuous use from the EM until the Ottoman periods.

Information about the settlement patterns of the Early Minoan period in the Ierapetra area is available from a few sites along the southern coast of Crete. Following the Final Neolithic period, a phase known for the foundation of sites in naturally defensible locations, a large number of settlements were founded during the EM I–II periods in close proximity to the lowland areas, and along the coast. Such a shift in settlement patterns could be related to the introduction of new economic practices that might have profited from a strong interest in sea trade.17

The site of Vainia Stavromenos, an important FN settlement located approximately 5 km northeast of the town of Ierapetra contracted in size during the EM I period and by the beginning of EM II seems to have been abandoned. It is possible that the population moved near the coastal plain of Ierapetra since there is evidence for EM II activity on a less defensible hill site located just north of the modern village of Vainia.18 This site was in close proximity to the valley of Ierapetra, and strategically controlled access to the arable coastal plain and mountain pastures.

The strategic location of certain sites during the EM I–II periods is further emphasized by the site of Aphrodite’s Kephali, located on a steep hill immediately west of the village of Episkopi. According to Betancourt, the site which he interprets as a guarding post was founded there in order to control the Isthmus pass that connects the northern to the southern coast of Crete as well as access to the Meseleroi Mountains.19

The abandonment of “refuge” sites can be also observed in the area of Anatoli, only ca. 3 km northeast of Myrtos Phournou Koripi. Several settlements there were founded on rocky defensible knolls during the Final Neolithic period and gradually abandoned during the succeeding EM I period. The sites of Pandotinou Koripi and Ellinik Koripi were given up in favor of the less defensible and more accessible sites of Schistra and Zoodochos during the EM I and EM II periods.20 The population obviously chose to live in less defensible areas and closer to fertile land and coastal regions. Such a settlement pattern could be related to the introduction of new agricultural strategies during the EM I–II periods and the foundation of small hamlets and farmhouses in order to better exploit the surrounding landscape.

Similar settlement patterns existed at the same time in the area of Myrtos, located approximately 10 km west of Ierapetra. The site of Myrtos Charakas, a naturally defensible site dating to the FN/EM I period, was abandoned at the end of the EM I period, and its inhabitants most likely moved near to coastal areas.21 In close proximity the site of Myrtos Phournou Koripi was built on a coastal hill that was naturally defensible, overlooking a cove that was probably used as a small harbor.22 The site dates to the EM II period and was founded at the same time as Myrtos Pyrgos, a settlement located only about 2 km to the west. Myrtos Pyrgos, in contrast to Phournou Koripi was continuously inhabited until the LM IB period. The reason for the site’s long history might be related to the settlement’s location. Myrtos Pyrgos was situated in close proximity to the fertile Myrtos valley, had a protected harbor in close distance, and had easy access to good pastures in the Dikti mountain range.23

The Middle Minoan Period

Evidence for MM I–II occupation on Chryssi was mainly recorded in the western part of the island with four sites producing MM II pottery (fig. 1, sites 1, 7, 25, 26). According to Apostolakou, MM IB–II pottery was found in several trenches during the excavation of the LM I settlement (fig. 2).24 No architecture associated with the MM period was found during the excavation. It is possible however, based on the amount of the MM material.

18 Nowicki 2002, 32; pers. comm.
20 Nowicki 2002, 32.
21 Nowicki 2002, 34.
22 Warren 1972.
24 Apostolakou et al. 2010, 147.
Konstantinos Chalikias

found across the site that a small, most likely seasonal settlement existed here prior to the Neopalatial settlement. Even though the evidence is not sufficient enough to determine the function and nature of site 1, one should consider the possible exploitation of the island’s marine resources during the Protopalatial period, especially the production of purple dye, since similar finds are known from the nearby island of Kouphonisi. The nature of the settlement there is unclear but the large amount of murex shells found in MM II layers suggests that the settlement was somehow involved in the harvesting of murex shells for the production of purple dye.

A few MM sherds were recorded along the eastern part of the island at site 17. The site was built in a strategic location, overlooking the small protected harbor of Kataprosopo. The pottery consists mainly of cup sherds, and fragments of tripod cooking pots. The large number of MM sherds found across the western part of the island, consisting of cooking pots and storage vessels, is indicative of the island’s exploitation for agricultural purposes.

There is a lack of evidence for the settlement history of the south Ierapetra Isthmus during the MM period. Information for the settlement patterns of the Protopalatial period comes primarily from the areas around the village of Vainia, and the site of Myrtos Pyrgos. Vainia Stavromenos, the large FN–EM I site along the eastern part of the Ierapetra plateau was abandoned shortly after the EM I period probably in favor of other settlements that were founded closer to the coastal valley. EM II–III surface pottery suggests that the site was occasionally visited during that period. The settlement was most definitely reoccupied during the MM I–II period, as evidenced by pottery material and several animal figurine fragments found in the area of the higher rocky acropolis and along the south slope. The existence of an enclosure wall along the southwestern part of the site that seems to have been built in order to offer protection to the inhabitants of the higher acropolis is puzzling. There is no way to securely date this structure but contemporary fortifications in the region are known from the sites of Oreino Petrokopia, Oreino Kastri, Mythoi Ellinika, and Myrtos Pyrgos. Additionally, MM II habitation on the rocky defensible knoll of Charakas, immediately north of Vainia Stavromenos, as well as on the defensible and almost inaccessible site of Monastiraki Katalimata, along the north part of the Ierapetra Isthmus, suggests major safety concerns towards the end of the MM IIB period.

Myrtos Pyrgos, located approximately 10 km west of Ierapetra, is the only other site along the south part of the Ierapetra Isthmus that produced substantial evidence for the settlement history of the Protopalatial period in the area. The site, in contrast to Myrtos Phournou Koriphi, was continuously inhabited throughout the Prepalatial period and by the MM IB–II period it must have been the leading settlement in the Myrtos valley. Excavations

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26 Personal observation.
27 Nowicki 2000, 88.
28 For Oreino Petrokopia, see Nowicki 2000, 80–1; 2008b, 78; for Oreino Kastri, see Nowicki 2000, 73–7; 2008b, 78; for Mythoi Ellinika, see Nowicki 1998, 194; for Myrtos Pyrgos, see Cadogan 1977–1978, 74.
29 Nowicki 2000, 88; 2008b.
at the site exposed the remains of a fortification wall with a tower, two large cisterns, and the sparse remains of a building on top of the hill, that could have been the predecessor of the later LM I “country house.” The economic prosperity and strategic importance of Myrtos Pyrgos for the broader region could have been related to settlement growth and economic stability in the area of the south Ierapetra Isthmus even though such a hypothesis has to be studied in more detail based on the lack of archaeological evidence.

The Neopalatial Period

Sixteen Neopalatial sites were documented during archaeological fieldwork on Chryssi, the largest of which (site 1) is located along the north-western part of the island (fig. 1). Bronze Age wall segments in association with large numbers of crushed murex shells were found in 2007 around a modern lighthouse on a small promontory called Mouri. The settlement (site 1) was partially excavated in 2008 and 2009 by the 24th Ephoreia of Prehistoric and Classical Antiquities with financial support from the Institute of Aegean Prehistory. Research at the site revealed the remains of six Neopalatial houses that date mainly to the LM IB period (fig. 2). The houses were constructed using only local stone material (limestone, volcanic stones). A more detailed investigation of the area surrounding the modern lighthouse exposed the remains of at least an additional 10–15 houses that most likely belonged to the Neopalatial settlement. The excavation produced copious amounts of pottery dating mainly to the LM IB period. A small number of MM III and LM IA pottery found within the houses suggests that the settlement could have experienced multiple phases of habitation and restructuring during the Neopalatial period. The finds include stone lamps, stone vases, bronze tools like fishhooks, knives, a needle and a saw, jewelry, and three seal stones. The preservation of the floor assemblages suggests that the settlement was suddenly abandoned during the LM IB period.

Preliminary results from the excavation suggest that the primary reason for the foundation of the large Neopalatial coastal settlement (site 1) on Chryssi was the exploitation of murex shells around the island for the production of purple dye. Substantial amounts of crushed murex shells were collected outside the excavated buildings but also within the houses implying that some of the dwellings might have been used as workshops.

Large concentrations of murex shells have been found at several Bronze Age sites across East Crete, however the presence of large amounts of murex shells at sites such as Itanos, Kouphonisi, and Chryssi indicates a well-organized network of settlements that were involved in the production and distribution of purple dye. Several small sites on the island of Chryssi produced evidence for Neopalatial activity (sites 7, 11, 12, 13, 17, 21, 23, 25, and 26). Even though it is difficult to determine the exact nature of these sites, it is possible that they were founded on Chryssi in order to exploit the natural resources of the island. Their size and the pottery found there suggest that they were probably small seasonal huts, shelters or farmsteads. The agricultural and pastoral exploitation of the island must have been important in order to supply the large Neopalatial settlement (site 1) on the western part of Chryssi with the necessary agricultural products.

Interestingly, the large number of sites on Chryssi Island during the Neopalatial period is a phenomenon well known from other small islands around Crete. The intensive exploitation of various natural resources during LM I combined with an increased interest in maritime trade networks is reflected in the foundation of permanent settlements on islands such as Pseira, Gavdos, and possibly Kouphonisi, and Dia.

Chryssi Island’s strategic location would have been ideal for ships that were looking for shelter or a safe harbor during their journey south of Crete. Moreover, the continuous use of the island since the EM period suggests that Chryssi could have participated in various Bronze Age trade and exchange maritime networks along the south coast of Crete (fig. 3). Certain commodities found on Chryssi such as purple dye, salt, sponges, and chert, were

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31 Apostolakou et al. 2010.
32 Apostolakou et al. 2010, 147.
33 Apostolakou et al. 2010, 147.
34 Apostolakou et al. 2010; Apostolakou et al. 2012.
35 For Itanos, see Whitley et al. 2007, 96; for Palaikastro, see Siteglitz 1994, 50; for Zakros, see Platon 1951, 251; for Kouphonisi, see Bosanquet 1902–1903, 276–77; 1939–1940, 72; for Makrygialos, see Reese 1987, 204.
37 For Kommos, see Shaw 2004, 2006; Van de Moortel 2007, 182; for Trypiti, see Vasilakis 1989, 1985; for Plaka, see Hadjidaki 2004; for Keratokampos, see Hood et al. 1964, 82–3; Batten 1995; for Arvi and coastal sites between Keratokampos and Arvi, see Hood et al. 1964, 84–6, 89–93; for Myrtos Pyrgos and Myrtos Phournou Koriphi, see Cadogan 1977–1978, 1997; Warren 1972; for Gra Lygia,
Konstantinos Chalikias

valuable resources often desired by communities of the opposite coast. The foundation of settlements on Chryssi and the subsequent exploitation of its natural resources must have been therefore implemented by a larger settlement or settlements located on the southern coast of Crete and more specifically in the area of Ierapetra.

Brief excavations in the area of the south Ierapetra Isthmus have exposed traces of Bronze Age activity though they have not yet located the economic and administrative center that would have controlled the coastal valley during the Protopalatial and Neopalatial periods. Evidence for Bronze Age activity in the area comes from two Neopalatial pithos burials in Gra Lygia, a MM II sealstone and LM III pottery from the village of Kentri and several Bronze Age objects that were stolen from the Ierapetra museum. Additionally, rescue excavations around Ierapetra have revealed cemeteries that date to the LM III period at the sites of Episkopi, Kalamafka, and Arapi Skala but were unable to locate the ancient settlements they belonged to.

Sites in close proximity to Ierapetra that demonstrate palatial architecture and could have functioned as administrative centers are Myrtos Pyrgos in the west, Makrygialos in the east and Gournia in the Mirabello Bay. However, the large size and specialized character of the Neopalatial settlement (site 1) on Chryssi suggests the existence of a dominant settlement along the south coast of Crete and most likely in the area of Ierapetra. Site 1 on Chryssi measures approximately 1–1.5 ha, and is so far the largest Bronze Age settlement in the area of Ierapetra, even larger than Myrtos Pyrgos, a settlement that covered an area of ca. 0.5 ha. The main reason for the foundation of settlements on Chryssi was the exploitation of the island’s natural resources, primarily the harvesting and processing of murex shells for the production of purple dye. Such a project could have been only initiated and organized by a larger settlement on the opposite coast, providing the “colony” with settlers, artisans, workmen, and food supplies. Since Chryssi Island lacks sufficient arable land and water sources, its inhabitants could not have been self-sufficient year round and must have been largely dependent on coastal settlements of the opposite coast.


40 See Chalikias 2013b on the possibility of a palatial center in the Ierapetra area.
41 Apostolakou et al. 2010, 147; for the size of the Neopalatial settlement at Myrtos Pyrgos, see Cadogan 1997, 100.

FIG. 3 Hypothetical Bronze Age maritime networks along the southeast coast of Crete.
The idea of a large coastal site in the area of Ierapetra is further reinforced by archaeological evidence from the site of Vainia Stavromenos. The settlement there was abandoned in MM II suggesting that its population could have been relocated or absorbed by a larger coastal settlement. As has been demonstrated through archaeological projects in the Mirabello Bay, the dissolution of Protopalatial site clusters is closely related to nucleation around large coastal settlements. Moreover, several sites in the vicinity of Episkopi and Kato Chorio were abandoned or shrank during the Neopalatial period implying that the population could have moved to the north coast of the Isthmus and around Gournia or to a new emerging settlement in the Ierapetra area. Furthermore, it was noticed during the Gournia survey that the Neopalatial pottery fabrics found in the northern part of the Isthmus were less predominant at sites around the villages of Episkopi and Kato Chorio, suggesting that maybe the coastal valley south of the village of Episkopi may have been under the influence of a major economic and administrative center, located in the area of modern Ierapetra.

Conclusions

Archaeological research on Chryssi Island by the 24th Ephoreia sheds new light on the Bronze Age settlement patterns of the southern part of the Ierapetra Isthmus. Even though Chryssi has been considered a marginal landscape, extensive habitation from the Final Neolithic until the end of the Neopalatial period demonstrates the particular importance of the island for Bronze Age settlements of the opposite coast. Chryssi was explored for its various natural resources throughout the Bronze Age as were many other offshore islands around Crete. The level of exploitation on small islands such as Chryssi, Kouphonisi, Pseira, and Gavdos was largely related to settlement expansion and economic prosperity on the coastal areas of Crete. The “colonization” of island habitats around Crete for the exploitation of their natural resources took place mainly during the Middle Minoan and Late Minoan I periods. The emergence of the first palatial centers on Crete coincides with the foundation of permanent settlements on islands like Chryssi. Even though we lack substantial evidence for the Bronze Age settlement history of the southern part of the Isthmus, it is quite possible, based on excavations by the 24th Ephoreia, that site 1 on Chryssi was founded, controlled, and managed by a larger dominant coastal settlement in the Ierapetra area that has yet to be discovered.

42 Personal observation.
44 Schultz–Barrick 2007, 194.
Bibliography


Introduction

The Bronze Age settlement of Papadiokampos is located in the coastal plain west of the Trachilos peninsula near Siteia in eastern Crete (figs. 1.1–1.2). A systematic investigation, including topographical mapping and geophysical survey with Ground Penetrating Radar, was undertaken at the site in 2006 under the direction of Chrysa Sofianou of the 24th Ephorate of Prehistoric and Classical Antiquities with the support of the Institute for Aegean Prehistory (INSTAP). The primary goal of these surveys was to determine the extent of the Bronze Age settlement in this unexplored part of northeastern Crete and identify targets for excavation. Previous attempts to use subsurface geophysical prospection at Minoan sites have relied primarily on magnetometry, which is better suited to the uneven Cretan landscape. This was not a problem at Papadiokampos where Ground Penetrating Radar, which provides detailed underground resolution, was used systematically prior to excavation. The results have proven instrumental to the location and discovery of subsurface remains, as well as the interpretation of areas without features.

Built at a strategic location on a promontory separating the Mirabello Bay from the Siteia Bay, Papadiokampos may have played a significant role in the Protopalatial and Neopalatial development of the Siteia region (see fig. 1.1). Tsipopoulou’s survey and excavations at Petras have recovered the remains of a small palace, which probably represented the most important site in the regional settlement hierarchy in both palatial periods. Ongoing studies of material from Papadiokampos are attempting to assess the possible economic, political or even ideological impact of the Petras palace on secondary settlements in the region (like those at Zou, Achladia and Klimataria).

Our understanding of the settlement and specific buildings at Papadiokampos has been greatly advanced by this topographical work and geophysical survey. Topographical mapping of the site revealed building remains that stretch for approximately 250 m along the coast and 50–100 m inland. Three streams conveniently divide Papadiokampos into four unequal sectors: Areas A, B, C and D (see fig. 1.2). A preliminary geological study by Floyd McCoy suggests that a substantial portion of the site – perhaps 20–30 m by 250 m – has been lost due to coastal erosion. However, the extant remains indicate that the settlement may have covered approximately 4–8 ha during the Late Minoan I period.

Subsurface surveys with Ground Penetrating Radar, or GPR, have been used in conjunction with excavation to document the chronology and size of the Minoan site at Papadiokampos. A Subsurface Interface Radar (SIR)-2000

1 For recent research at the site, see Sofianou and Brogan 2009a, 2010; Brogan and Sofianou 2009; Brogan et al. 2011a.
2 Tsipopoulou and Papacostopouli 1997; Tsipopoulou 2002.
3 Sofianou and Brogan 2012; Brogan et al. 2011b, 590–93.
4 Floyd McCoy, pers. comm. (2010).
A system with a 400 MHz antenna was used to collect the GPR data, which was then processed using RADAN software. The GPR grids were collected in 25 cm transects, and all of the grids were collected in two datasets: an east-west orientation followed by a north-south orientation, resulting in an orthogonal grid. The reason for an orthogonal collection is to avoid missing any data while moving in any one direction. Moreover, it is important to ensure that the grid is at an angle to any possible features in order to provide the greatest visibility.

Actually conducting a GPR survey is not as easy a task as it may sound because the radar must maintain contact with the ground at all times in order to maximize signal strength and consistency. Consequently, the area must be adequately prepared, which entails clearing the surface of any loose material such as stones, stumps, grass and anything else that would interfere with the radar’s passage. In some instances, holes must also be filled in. Essentially, the flatter the area the better, since the radar assumes that even sloped ground is horizontal, thereby skewing the data that must be interpreted. At Papadiokampos, each GPR grid was named according to its location: Area A, Area B, Area C and Area D. All four areas provided interesting and significant results, most of which were verified by subsequent excavation.

**Area A**

Although a test trench was initially opened in 2004, GPR surveys did not begin in the Antonakakis plot, also known as Area A, until 2006 and they continued there in 2008 (fig. 2.1). Trial trenches opened in the relatively flat field in 2005 had exposed part of one room of a Minoan house near the sea and remains of a long wall of unclear function along its south side. A total of six GPR grids were laid out in Area A: two in 2006 and four in 2008.

Survey grids were placed between open trenches and the dump pile in order to locate any continuation of visible walls as well as traces of other walls that may have been missed by the test trenches. The grids at the east end of the plot focused on capturing a more complete image of the Late Minoan I house identified in one of the test trenches. Although the grid’s position missed most of the house’s interior, it did help us understand the surrounding space.

Anomalies began appearing almost immediately in the data. At a depth of about 0.47 m, two features were easily visible. Feature A appears to form a right angle, or corner, on the southeastern edge of the grid (fig. 2.2). It measures roughly 1.5 x 4 m in size. The southwestern portion of the anomaly is a bit noisy, which may be suggestive of tumble. Furthermore, there appear to be at least two compartments in this feature, which suggests a room, or a series of rooms. Considering that House A.1 is immediately adjacent to the grid on the east, it is very likely that Feature A is related to it. The second feature is located in the center of the grid and appears to be two walls forming a right angle; it measures roughly 1 m in length and over 1 m in width. Identification of both these features as walls or rooms, possibly of a different phase from that of House A.1, should not be ruled out.

Grid A is particularly informative in that it presents direct correlations with features visible in the trenches of House A.1 to the east; moreover, the presence of subsurface anomalies has been confirmed by excavation. A 2 x 2 m test trench just west of House A.1 was opened at the end of the 2008 excavation season in an attempt to locate a possible metallic signature and instead found a subsurface structure: two walls, one oriented east-west and the other north-south, forming a right angle and likely joining with House A.1 to the east.
Additional evidence that House A.1 continues to the west is provided by the westward extension of the porch wall. This wall continues south from the house for a few meters before turning west and disappearing into the baulk, indicating that the wall created an open porch in front of the entrance to the house. The radar grid picked up the continuation of this wall, and also revealed that it forms a corner with another wall which then runs north, thus revealing the full size of the porch.

The radar grids on the west side of the Antonakakis plot (Radar Grids B and C) revealed very few anomalies. On the one hand, this important negative evidence allowed us to focus the excavation on House A.1 – the ten room, two-story Late Minoan IB house next to the sea. On the other hand, it also aided our interpretation of the long wall that flanks the southern side of the Antonakakis property. Shallow trenches in 2005 had revealed a wall with two faces that could have formed part of one or more Late Minoan I houses; however, the radar grids and a single test trench in 2008 suggested a different interpretation.

Grid B showed no return walls on the north side of the Antonakakis plot, indicating that the long wall south of House A.1 had probably served as a raised barrier surrounding a large yard on the west and south sides of the house – perhaps an animal pen or garden (see fig. 2.2). Excavation in the south end of the plot confirmed this identification and revealed a series of gravel sediments fanning up against the lower courses of the wall, which probably also served to protect the house and property from the stream that flowed immediately to the south.5

The final picture of Area A provided by both GPR and excavation is that of a small farmstead at the edge of the Late Minoan I settlement.6 At the time of destruction, the house was being used by a group eating repeated meals of shellfish, which are easily gathered along the shore. Other organic and inorganic remains suggest that the inhabitants were also farmers raising flocks of sheep and goat, as well as growing grapes and olives. The modest pottery

5 Brogan and Sofianou 2009, 123–24.
6 Sofianou and Brogan 2009a.
and ground stone tools were largely of local manufacture and suited to preparation and consumption of food and the processing of grapes and olives. Evidence for other crafts is limited to the hammering of copper strips into tools (such as hooks and needles) and a limited production of stone vases or tables.

**Area B**

Part of another, even larger, Minoan building had been destroyed by winter storms along the coast in Area B at Papadiokampos (fig. 3.1). Small finds exposed in the eroded sea-scarp included a copper ingot fragment, a bronze sickle and a large stone mortar. A small test trench dug in 2008 revealed part of a large room with well-preserved storage and cooking equipment dating to the Late Minoan IB period. The area immediately to the west of the test trench had been incorporated by the owner into a small, flat grape orchard and vegetable garden – an area that was well suited for a GPR survey. The large 2009 GPR grid laid out in Area B measured 16 m x 24 m and covered as much of the flat, open area as possible. It also included part of the backfilled trench from the 2008 excavation in its easternmost corner.

Anomalies began appearing almost immediately in the data, and a clear image became apparent at almost a meter in depth (fig. 3.2). The anomaly (labeled Feature B) appears along the northeastern edge of the grid and is undoubtedly rectilinear in shape. In the form of a giant "W" oriented roughly north-south, Feature B measures approximately 13 m in total length and about 5 m in overall width. The grid in Area B turned out to be very informative because it presented direct correlations with features that were later uncovered during the 2009 and 2010 excavation seasons. As can be seen in the overlay, the large "W" along the northeastern edge of the GPR grid is clearly the southwestern corners and rooms of the Late Minoan I House B.1 (see fig. 3.2).

Furthermore, the reason for a weaker signal in the western half of this feature, in comparison to the stronger, eastern side, revealed itself during excavation. The eastern half of the building was constructed with much larger stones and the walls are generally thicker than the western half, which has slimmer walls and stones of a much smaller size. The differences in wall construction are probably indicative of two different phases of construction: the thicker eastern walls were part of the first phase of the house built in Late Minoan IA, while those on the west side belong to rebuilding and repairs in Late Minoan IB.

In addition to the differing signal strength, there was a slight opening visible in the dataset. This was not due to a doorway (though there may have been one here in antiquity) but to the lack of large stones in that particular section of the wall. The absence of any additional remains in the grid west of the building indicates the presence of another open yard on the west side of House B.1 and south of House B.2 – a poorly preserved house 20 m to the northwest. House B.1 is therefore the second dwelling at Papadiokampos that includes a large open yard, and

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Fig. 3.1 Aerial view of Area B, with House B.1 indicated (aerial image courtesy of Google Earth).

Fig. 3.2 AutoCAD representation of House B.1 with overlay of Ground Penetrating Radar (GPR) grid (A. Stamos).

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Soianou and Brogan 2009b.
this suggests that at least part of the town had a more open plan than the packed blocks of houses at the nearby settlements of Mochlos, Pseira and Gournia. While this may reflect a meaningful difference in the organization of houses at Late Minoan I Papadiokampos, one should not forget that a clear picture of the edges of towns in the Mirabello region is unfortunately missing. The presence of yards next to Houses A.1 and B.1 at Papadiokampos may simply reflect greater access to land in what amounts to a Late Minoan I suburb.

**Area C**

Area C, which may represent the center of the settlement, was surveyed in 2009 and 2010 (fig. 4.1). The 2009 GPR grid was placed along the seaside cliff where several pots had been discovered slowly eroding out of the scarp 8 m above sea level. The grid measured 10 x 16 m and was laid along the flat area behind these pots in the hopes of detecting some of the walls of the structure or room to which the pots belonged.

Unfortunately, this grid proved to be extremely noisy and difficult to interpret, although some walls were discernable. Several anomalies were visible early on and became clearer around 0.63 m below the surface. The smaller anomalies range from 0.50 m to 2.5 m in length, and the majority are oriented roughly north-south. One anomaly measures approximately 14 m in total length and is rectilinear in shape. It appears to be oriented east-west, and its overall appearance is that of a large, long wall with at least one four-meter-long extension to the north. Excavation during the 2009 season within the GPR grid revealed several Neopalatial and Protopalatial walls. Aside from the uppermost wall, found about 10–15 cm below the surface, the remaining walls were 1–2 m below the surface, thus indicating that the walls in this particular area of Papadiokampos are buried beneath a particularly deep fill. The trench also contained a substantial deposit of high quality Middle Minoan II pottery.

The 2010 GPR survey in Area C was much more informative, and exploration will continue in future excavation seasons. The aim of the 2010 survey was to locate additional features adjacent to the 2009 trench. As such, two

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8 Sofianou and Brogan 2012, 334–36.
Making the Invisible Visible

grids, Grid East and Grid West, were placed on either side of the 2009 GPR grid and trench (fig. 4.2). Although Grid East appears to contain no subsurface features, the anomalies in the southwestern corner of the grid, likely composed of stone or clay, are still very intriguing, especially considering that there appears to be nothing else in the immediate vicinity.

Excavation in 2009 and 2010 demonstrated that two long, irregular walls near the surface were terrace walls for agricultural fields in the Late Minoan period. The lower parts of the 2009 trench revealed traces of two Middle Minoan II phases and included substantial amounts of crushed murex, indicating the area may have been used for the production and use of purple dyes. Future excavation will test if the anomalies in Grid East have any connection with this industry.

The features in Grid West more than compensate for any absence of features in Grid East. Feature C is a very prominent, strong anomaly taking up most of the eastern half of the grid, measuring roughly 8 x 8 m in size (see fig. 4.2). Consisting of a corner of a built structure, Feature C also appears to be internally compartmentalized, suggestive of a series of rooms within a building. The orientation of Feature C is also interesting in that it appears to line up with the walls of House C.1 found during the 2010 excavation, as well as with the walls visible in the cliff face. The evidence from Grid West indicates that several more rooms are preserved to the west, while the northern portion of the house has been destroyed by the eroding cliff-side. The excavated Neopalatial remains to the east include open terraces for gardens beside the remains of an isolated room with gournes, which may have served as a pantry, food processing area, or possibly even a stable.

A small paved street ran between this room and what appears to be the east façade of the Late Minoan IB house, C.1. This is the first street identified at Papadiokampos, which seems to confirm our hypothesis that we are in a more densely built part of the Late Minoan town. The street leads to the entrance of House C.1, where parts of two rooms with several well-preserved Late Minoan IB vases were recovered. Further radar work along the coast in Area C is planned, particularly to the west in the direction of House B.1, where numerous walls are visible in the cliff-side.

Area D

The final survey area was Area D, located at the eastern edge of the Papadiokampos settlement (fig. 4.3); a thick layer of Santorini tephra was discovered here during the 2007 topographical mapping in the sea-scarp next to a wall. The GPR grid in Area D was the smallest of the Papadiokampos grids, measuring only 6 x 8 m in size, and it was placed atop the flat area immediately to the south of the ash layer.

The grid in Area D, as in Area B, was surprisingly accurate in regards to the excavated architectural finds (fig. 4.4). The long, angular Feature D takes up most of the grid. It measures six meters in length by about two meters in width and has a strong north-south orientation. Subsequent excavation revealed that not only was Feature D a long wall running north-south through the two trenches, but it also appears to join with the wall eroding out of the scarp.

Excavation also revealed that the Theran ash had not collected inside a collapsed Late Minoan IA room as originally believed. Instead, it appears that only some of the ash had fallen in the area but natural weathering and erosion brought more downhill. The ash layer thickens towards the sea, suggesting that it had collected against a terrace or house on the northern side of the trench, which has now eroded away. By using the finds from Area A, it is possible to suggest a similarly isolated Late Minoan I house surrounded by terraced fields on the eastern edge of the settlement at Papadiokampos.

Conclusions

The discovery of houses, terrace walls and open spaces at Papadiokampos has proven that Ground Penetrating Radar can play an instrumental role in the location and identification of subsurface features at Minoan settlements with flat open spaces. At Papadiokampos, the radar’s detection of two large buildings, with the addition of a third in Area C, has coincided precisely with the excavated finds, adding further credence to the efficacy of the equipment at the site. At the same time, GPR is not appropriate for every site, as proven by earlier, less successful attempts at neighboring Minoan sites where the uneven ground levels and the thick overgrowth made radar impossible.

The correlation between GPR and excavation is a significant bonus not only to the excavation itself, but also to the study of Papadiokampos and its position during the Protopalatial and Neopalatial periods on Crete. Moreover, GPR has helped identify and interpret open spaces near houses, which probably served as gardens or pens. The survey not only helped minimize the use of valuable resources in the excavation of these open areas, but was also able to add valuable new pieces to the local urban puzzle, which for now appears to distinguish the organization of this Late Minoan I town from those at Mochlos, Pseira and Gournia in the Mirabello region.
Bibliography


Capturing the Dynamics of Minoan Mortuary Space in South Central Crete*

Sylviane Déderix

Some Minoan funerary choices have been materialized on the land through the establishment of burial places. They can thus be recovered thanks to careful analysis of the position allocated to burial sites within the wider natural and human environment of Bronze Age Crete. Accordingly, this paper uses the area of South Central Crete as a case-study to examine some of the opportunities, issues and limitations related to the implementation of Geographical Information Systems (GIS) to study mortuary landscapes of Bronze Age Crete.

Introduction

As is recognized today, landscape is not a passive backdrop of human activity. Nor is it just a physical environment that constraints and enables human lives, and to which people have to adapt. In the course of daily practices, human beings move on the surface of the earth, they experience the world, and they imbue it with meanings according to their social, political, economical, ideological and historical specificities. Every landscape is thus culturally constructed. And if landscape is involved in shaping human experience and activity, it is in turn marked by human intervention. Through the arrangement of objects within it, space is therefore transformed into an artifact that can be studied just like the rest of material culture. In other words, the exploration of the spatial patterning of traces left by human activities has the potential to provide some insights into the daily life of past societies.

This paper is concerned with the spatial patterning of one particular type of archaeological traces: funerary remains. Of all the choices made by a human group regarding the treatment of its departed, those related to the location of cemeteries are among the most fundamental. According to Parker Pearson, “where we put their remains is generally a conscious and carefully thought-out activity by which the dead are both remembered and forgotten, and through which we reaffirm and construct our attitudes to death and the dead and, through these, to place and identity”. Universal fears associated with death, the dead, the decomposition of the body and the related pollution require the deceased to be kept away from the living. But at the same time, the dead are neither completely excluded from the community nor forgotten. They still inhabit memories, and they are often incorporated into cosmologies. They may also be perceived as active, powerful members of the community, dwelling in the world as spirits or ancestors, protecting the living, strengthening the identity of the group, ensuring prosperity, or symbolizing the rights of the community over territory and natural resources. The segregation and the integration of the dead are achieved symbolically by ritual practices, but also physically and spatially through the establishment of burial places in the landscape. A careful examination of the spatial arrangement of burials can thus provide a better understanding of mortuary behaviors and meanings. However, archaeological visibility is not sufficient to judge the cultural importance of a landscape, and the environment of ancient societies needs to be comprehended as a whole. The implementation of Geographical Information Systems (GIS) is of particular interest in this context, inasmuch as they enable to manage, display and relate large amounts of archaeological, topographic and geomorphologic data.

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1 Bender 1993; Knapp and Ashmore 1999; David and Thomas 2008.
2 Blake 2001, 150.
3 Parker Pearson 1999, 124.
4 Parker Pearson 1993; David et al. 2008.
5 Bradley 2000.
GIS, Landscape and the Archaeology of Death

Within the past few decades GIS have become increasingly important in archaeology, both for in-site analyses and for regional applications. Archaeological research in Crete has followed this tendency by making increasing use of GIS, sometimes in combination with other techniques such as satellite and aerial imagery, geophysics, or web-based databases. With respect to regional studies, a number of GIS projects have been developed for the island, spanning from the management of ancient sites to the support of archaeological surveys. Many of these projects have relied on the Archaeological Atlas of Crete (developed by IMS-FORTH), in which more than 5,500 sites were registered in relation to geographic and topographic thematic maps. This fusion between cultural and environmental datasets initiated applications concerned with archaeological risk assessment due to natural and anthropogenic causes.

Within the context of archaeological research, the surveys carried out around Itanos, Vrokastro and Rethymno made extensive use of GIS to reconstruct settlement patterns in the areas in question. Katifori examined the loca-

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**Fig. 1** The distribution of cemeteries in South Central Crete. “FES”, “KOM” and “Agiofarango” correspond to the numbering of sites in Watrous et al. 2004, Shaw and Shaw 1995, and Blackman and Branigan 1977. At Trypiti – Phylakas were identified two circular tombs (Phylakas North and South) and a possible third example (Phylakas East) (information by K. Sbonias).

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6 Sarris et al. 2002a; Sarris et al. 2009.
7 Alexakis and Sarris 2010; Sarris et al. 2002b.
8 Sarris et al. 2007; Costa et al. 2008;Charitopoulos and Sarris 2009.
tion of Venetian monasteries in the Lasithi prefecture, and Ilvanidou dealt with the reconstruction of the Roman road network of Crete on the basis of least cost models. Relying on efficient land use and on the clustering of sites around arable spots, Tomkins et al. were also able to propose a hierarchical model of Neolithic sites in Eastern Crete.

More sophisticated processes were undertaken to study the cultural landscape of Minoan Crete. For instance, Athanasaki defined the environmental and climatic settings of Bronze Age wine processing facilities, while GIS tools made it possible to highlight relations between peak sanctuaries and palaces. Spatial analyses of the so-called soroi in the Pediada region proved crucial in assessing the complexity of Minoan communication networks. Indeed, satellite remote sensing and GIS stressed spatial and visual connections among soroi and settlements and the role of soroi in controlling paths, which all together tend to corroborate Panagiotakis’s hypothesis that these small man-made hills were “used as beacons for fire signalling among settlements”. In addition, a multi-method research project was recently undertaken at the University of Heidelberg to reconstruct the settlement pattern and ancient roads in Central Crete, around the Neopalatial site of Zominthos.

However, until now, the Minoan funerary landscape has not been approached with the support of new technologies. Actually, little attention has been devoted to the spatial dimension of burial places in Bronze Age Crete. Some exceptions can be noted, such as Georgoulaki who focused on the topographic settings of Prepalatial and Protopalatial cemeteries, and Vavouranakis who investigated the evolution of the visibility of tombs in the landscape of East Crete. Branigan also pointed out that the location of circular tombs in the Mesara, together with architectural and ritual evidence, reflects a contrasting attitude of both incorporating the dead into the community of the living and keeping it at a distance.

But even if interesting results were obtained, these studies proved to be isolated, empirical, localized and non-systematic. Investigations carried out in other prehistoric contexts, however, showed that making use of GIS services to analyze the spatial arrangement of burial sites in relation to the rest of the landscape has the potential to shed new light on funerary practices. In this way, Löwenborg took advantage of GIS and statistics to model the landscape and predict the chronology of cemeteries in central Sweden. Also, viewshed analyses carried out on Early Bronze Age burial mounds in southern Sweden allowed Lageras to confirm that these structures were located in such a way that they offer high visibility towards their surroundings, and especially towards the sea. In a recent article concerned with the prehistoric remains of southern Spain, Wheatley et al. argued that the role played by megalithic constructions in the social organization of landscapes largely exceeded their use as funerary containers. The results of cost-surface modelling emphasize possible connections between mortuary buildings and pathways in the area of Almadén de la Plata, which supports the idea that megaliths structured the patterns of movement in the area, while theoretical catchments (based on a “time distance” model) computed for prehistoric settlements around Aracena suggest that megalithic tombs functioned as territorial markers.

Within this context, this paper aims at outlining a GIS-based methodology to recognize the position allocated to burial sites within the wider landscape of Bronze Age Crete, and from there, to shed new light on the relationships that Minoan people maintained with their dead. More specifically, it focuses on South Central Crete, from the beginning of the Bronze Age until the fall of the Second Palaces. The area yielded a large amount of tombs and occupation sites, which makes it a suitable case-study to evaluate some of the opportunities, issues and limitations related to the exploitation of GIS in studying funerary landscapes. After introducing the archaeological and spatial

9 Katifori 2005.
10 Ilvanidou 2005.
12 Athanasaki 2005.
13 Soetens et al. 2002; Soetens et al. 2008.
14 Sarris et al. 2011.
15 Sarris et al. 2011.
16 Siart et al. 2008.
17 Georgoulaki 2009.
20 Löwenborg 2009.
21 Lageras 2002.
22 Wheatley et al. 2010.
data currently available, this paper proposes updating the geographical and chronological distribution of tombs in South Central Crete. It then considers some of the GIS analyses capable of highlighting the spatial and visual connections established between the abode of the dead and the world of the living in Bronze Age Crete.

Study Area

The area defined as “South Central Crete” comprises the Mesara plain and the hills and mountains that border it to the North (the southern slopes of the Psiloritis or Mount Ida) and to the South (the Asterousia Mountains). The alluvial plain of the Mesara, watered by the Ieropotamos river, represents about two-thirds of the best arable land on the island. The hill-slopes surrounding the plain are also used for cultivation, but as “the slopes get steeper and the altitude higher, so the use of terraced fields and olive groves grows less and the land is suitable for little other than grazing sheep and goat”. Indeed, the Asterousia Mountains consist largely of rugged, rocky slopes covered with scrub, that form an agriculturally marginal landscape even if patches of arable lands are available.

South Central Crete is one of the most studied areas of the island. The discovery of monumental tombs drew the Mesara to the attention of archaeologists from the beginning of the 20th century onwards. Later, surveys were carried out along the South Coast, in the Agiopharango Valley, in the western Asterousia, around Kommos, in the Plain of Phaistos, and recently around Moni Odigitrias. In spite of methodological issues and limitations related to surface surveys, such fieldwork campaigns have provided researchers with an unusually large set of information concerning the occupation of the western part of the Mesara and the Asterousia. South Central Crete is also characterized by a particularly high density of Minoan funerary sites, with a total of 76 cemeteries recognized until now (fig. 1). The area is often quoted for its circular tombs (the so-called tholoi), but other burial types are attested as well.

The Neolithic tradition of depositing the dead in small caves, rock shelters and crevices continued well into the Bronze Age. Although they are particularly frequent to the North and the East, Minoan burial caves are known all over the island, with the notable exception of South Central Crete. In the Asterousia, only the Miamou cave yielded evidence of funerary use. In addition, a rock-cleft at Skotoumenou Charakas was apparently filled with material and bones cleared from the surrounding tombs.

Circular tombs form the architectural type associated with South Central Crete par excellence. Out of a total of almost 80 examples distributed among some 60 cemeteries, the large majority is concentrated in the Asterousia, in the Mesara plain and on the southern slopes of Mount Ida. The remaining dozen examples are scattered in the northern and eastern parts of the island. The circular tombs of South Central Crete are also more monumental and their main chamber is quite often fronted by an anteroom or even a whole complex of annex rooms. Such structures can be found isolated, gathered in groups of two or three, or accompanied by other types of funerary structures. They were used over an extended period of time and yielded the remains of numerous burials. Unfortunately, most of them have been looted, hastily excavated and/or summarily published, with the result that many questions persist regarding structural characteristics, burial practices, and ritual activities associated with circular tombs.

Although they are more common to the East and North, structures of rectangular plan have also been discovered in the cemeteries of South Central Crete. Two orthogonal buildings were erected in the cemetery of Hagia Triada during the Proto- and Neopalatial periods. Yet, it is probable that neither the South Building nor the so-called Tomb 5 were primarily planned as burial structures. Xanthoudides excavated a rectangular tomb at Koumasa and Porti, as well as “small buildings square in plan” at Platanos. Traces of a rectangular structure were also identified at Skotomenou Charakas. All these structures are badly known and none is preserved except for Tomb Γ at Koumasa. They were all discovered in association with circular tombs and are generally considered of less impor-

23 McEnroe 2010, 4.
25 For the Agiopharango: Blackman and Branigan 1977, fig. 34.
27 Karantzali 1996, 83.
28 Blackman and Branigan 1977, 51.
30 Xanthoudides 1924, 93; Soles 1992, 193.
31 Blackman and Branigan 1977, 51.
tance, being described as small huts, ossuaries, store-rooms, or burial places of poor people. On the other hand, Blackman and Branigan recognized an isolated rectangular building and a cluster of two small structures in the Agiopharango Valley. On the basis of a few fragments of human bones visible on the surface, they identified these architectural remains as possible tombs/ossuaries. But the most striking rectangular structures of funerary character are to be found at Kephali Odigitrias – Stou Skaniari to Lakko: in addition to two tholos tombs, this cemetery includes three large rectangular buildings, each of them consisting of several rooms and spaces. Unfortunately the site has been only summarily published, with the result that the architectural details, content and exact function of these buildings are still obscure.

The burials in the remaining 21 cemeteries of South Central Crete are of unknown type and/or unsure identification. They did not yield any architectural traces. Most of them were recorded during the survey of the plain of Phaistos, but Watrous et al. did not clearly detail their arguments in recognizing burial sites. Many are located on the Ieroditis Ridge, which is said to be the “main Phaistian cemetery”. By contrast, only four possible cemeteries were recorded in the Kommos survey. Such discrepancies between the two areas are most probably related to differing surveying methodologies.

Spatial Data

The first step in building a GIS model for the Minoan funerary landscape is to position the sites of interest within the three-dimensional geographical context of the island of Crete. With respect to environmental data, current research benefits from the digital cartographic archives that exist in the depository of the Laboratory of Geophysical-Satellite Remote Sensing & Archaeo-Environment (IMS-FORTH), which includes:

- A Digital Elevation Model of 20 m resolution constructed by SPOT satellite stereoscopic images.
- Geological maps (scale 1:50.000) of the Institute for Geological and Mineral Exploration.
- Soil Depth maps (scale 1:50.000) of the Greek Ministry of Agriculture.
- Modern land use maps (scale 1:50.000) of the Greek Ministry of Agriculture.

The identification and registration of cemeteries was mostly carried out through aerial orthophotos and high resolution satellite images, in combination with GPS surveying to support the rectification of the images. A Leica GS20 GPS unit allowing an accuracy of ca. 1 m was employed. However, locating Minoan tombs did not prove to be such an easy task, not only because of the roughness of the Cretan landscape, but also because the tombs are usually badly preserved, often isolated, and their location is as a rule poorly referenced in the literature. Several funerary sites could therefore not be identified with certainty. In addition, it was not feasible to locate all Minoan settlements, hamlets and farmsteads using the same procedure.

The alternative was to complete the dataset with information provided by the reports of archaeological surveys and to digitize the published maps in order to position approximately the sites discovered in the regions under investigation. The digitization techniques in GIS involved a two-step process. First, the published maps had to be georeferenced, that is to say “located in geographic space, their position being defined by a specified coordinate system”. In order to do so, it was necessary either to know the exact coordinates of some points on the maps, or to overlay the scanned maps on a digital cartography the position of which had already been defined. Then, once the maps were georeferenced, the position of the sites of interest could be retrieved simply by pinpointing them.

The accuracy of the geographic coordinates obtained by means of digitization depends on the quality of the available maps – i.e. their scale, the details described, as well as the exactness of the positioning of natural and archaeological features. A series of tests was carried out to estimate the reliability of maps published in archaeological survey reports: the correct coordinates of several cemeteries were compared to those retrieved using digitization techniques. Regrettably, the outcome of the tests indicated large deviations that reflect fuzziness, but also mistakes in the positioning of sites in many publications (table 1). This situation raises serious questions about

32 Xanthoudides 1924, 33, 93; Blackman and Branigan 1977, 51.
33 Blackman and Branigan 1977, 58–9 (W8), 60–1 (W11A).
35 Watrous et al. 2004, appendix D.
36 Watrous et al. 2004, e.g. 537.
37 Shaw and Shaw 1995.
Capturing the Dynamics of Minoan Mortuary Space

the usability of such maps. Within the frame of the present study, the best option seemed to try to reduce the error span by taking into account the textual description of the location of sites, as provided in the reports. Moreover, a fuzziness index was assigned to the digital positioning of each site to assess the relevance of the results of spatial analyses.

### Spatial and Chronological Pattern of Funerary Remains in South Central Crete

In use for many centuries and robbed since ancient times, the circular tombs of Early Bronze Age Crete have been much disturbed and are therefore extremely difficult to date. Nevertheless, it appears that they were first constructed on the south slopes of the Asterousia Mountains at the very beginning of EM I. During the EM I period, circular tombs were in use in no less than 18 cemeteries (fig. 2). Most examples are localized in the western Asterousia, although some have been identified eastwards, on the northern foothills of the mountains and along the coast. Also, this peculiar burial type was probably already used at Marathokephalo, on the south slope of Mount Ida. Besides circular tombs, two structures of rectangular plan have been hypothetically dated to EM I, the first at Kephali Odigitrias – Stou Skaniari to Lakko, and the second in the Agiopharango Valley. The rectangular building of the Agiopharango is only hypothetically identified as a tomb and it is dated without any certainty. On the contrary, the cemetery of Stou Skaniari to Lakko is of much interest, as the construction of its Building 2 has been placed back to the EM I/II period, while the earliest house tombs of Eastern Crete are EM II in date. Finally, it is also during the first phase of the Early Bronze Age that the Ieroditis Ridge started to be used for funerary purposes.

The burial sites in South Central Crete increased in number into the EM II period. The density of cemeteries consisting of circular tombs slightly rose in the western and central Asterousia, along the southeast side of the Mesara, and on the south slope of Mount Ida. Burial structures of circular plan also made their first appearance in

<table>
<thead>
<tr>
<th>Survey</th>
<th>Cemetery</th>
<th>Offset (in m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackman &amp; Branigan 1975.</td>
<td>Kaloi Limenes A</td>
<td>268</td>
</tr>
<tr>
<td></td>
<td>Chrysostomos</td>
<td>173</td>
</tr>
<tr>
<td>Blackman &amp; Branigan 1977.</td>
<td>Agiopharango – Agios Antonios</td>
<td>126</td>
</tr>
<tr>
<td></td>
<td>Agia Kyriaki A</td>
<td>677</td>
</tr>
<tr>
<td></td>
<td>Megaloi Skinoi I</td>
<td>256</td>
</tr>
<tr>
<td></td>
<td>Megaloi Skinoi II</td>
<td>82</td>
</tr>
<tr>
<td></td>
<td>Agiopharango – Agios Antonios</td>
<td>236</td>
</tr>
<tr>
<td></td>
<td>Agia Kyriaki A</td>
<td>126</td>
</tr>
<tr>
<td></td>
<td>Megaloi Skinoi I</td>
<td>233</td>
</tr>
<tr>
<td></td>
<td>Megaloi Skinoi II</td>
<td>470</td>
</tr>
<tr>
<td></td>
<td>Kephali Odigitrias – Agios Georgios</td>
<td>336</td>
</tr>
<tr>
<td></td>
<td>Kephali Odigitrias – Skaniari to Lakko</td>
<td>690</td>
</tr>
<tr>
<td></td>
<td>Moni Odigitrias</td>
<td>492</td>
</tr>
<tr>
<td>Watrous et al. 2004.</td>
<td>Agia Triada</td>
<td>204</td>
</tr>
<tr>
<td></td>
<td>Kamilari – Grigori Koryphi</td>
<td>539</td>
</tr>
<tr>
<td></td>
<td>Kamilari III</td>
<td>558</td>
</tr>
<tr>
<td></td>
<td>Siva Pyryiotissis – Platies Opsies</td>
<td>139</td>
</tr>
<tr>
<td></td>
<td>Sopata Kouse</td>
<td>1166</td>
</tr>
</tbody>
</table>

**Table 1** Outcome of the tests carried out to evaluate the accuracy of the maps published in survey reports. The offset reflects the deviation between the actual position of cemeteries and the coordinates retrieved by digitization.

39 Branigan 1993, 147.
40 Blackman and Branigan 1977, 60–1.
41 Saltos 2000, 194.
43 Watrous et al. 2004, 226.
Fig. 2  Evolution of the distribution of cemeteries in South Central Crete.
the western Mesara, with the establishment of a necropolis at Hagia Triada.\footnote{44} Moreover, rectangular structures are attested in a minimum of two EM II cemeteries (Koumasa and Kephali Odigitrias – Stou Skaniari to Lakko), and the cave of Miamou, which was previously used for habitation, then turned into a burial place.\footnote{45}

In spite of important changes in the individual history of many cemeteries between the EM II and the MM I periods, the overall funerary pattern did not fundamentally evolve in South Central Crete.\footnote{46} Even if some old tombs were abandoned and new cemeteries were founded, the total number of burial sites in use increased only slightly. Similarly, the general distribution of cemeteries remained almost unchanged during the MM I period, as the majority of them were still localized in the Asterousia Mountains. The most noticeable evolutions are a rise in the number of cemeteries making use of rectangular structures, an increasing density of burial sites in the western Mesara (with the construction of two circular tombs at Kamilari\footnote{47} and the extension of the Ieroditis Ridge necropolis), as well as the diffusion of the “tholos” type around Vorou, to the northeast of the Mesara.\footnote{48}

By contrast, the spatial patterning of MM II cemeteries testifies to a serious transformation of the funerary landscape and inaugurates a period of low visibility for the Minoan dead. The majority of built cemeteries were abandoned in the course of the MM I period. The circular structures in the Asterousia and eastern Mesara were almost completely deserted, apart from some sites on the northern foothills of the Asterousia. The only exception in this picture of desertion concerns the western Mesara: the cemeteries of Hagia Triada, Kamilari – Grigori Koryphi, Kamilari III and several non-built necropoli remained in use during the MM II phase, when a new tholos tomb was also erected at Kamilari – Mylona Lakkos.\footnote{49}

The abandonment of cemeteries (and particularly of built tombs) continued into the MM III and the LM I periods. Traces of LM I activity have only been recognized at Hagia Triada (in Tomb 5, which was probably not used for burials at that time),\footnote{50} at Platanos (in the small rectangular buildings),\footnote{51} on the Ieroditis Ridge,\footnote{52} and probably in the large tomb of Kamilari.\footnote{53} In addition, a few non-built cemeteries were perhaps in use in the western Mesara,\footnote{54} whereas LM I sherds have been identified in the Agiopharango, within a rectangular structure possibly used for burial purposes.\footnote{55}

In South Central Crete, the end of the MM I seems therefore to be a turning point. It inaugurates a period of abandonment of ancestral cemeteries and, even more interesting, a shift in the spatial distribution of burial structures. While the early circular and rectangular tombs were mostly concentrated in the Asterousia Mountains, the MM I phase saw an increase in the density of built tombs in the western Mesara, with the enlargement of the Hagia Triada cemetery and the establishment of two circular tombs around Kamilari. The large majority of old funerary buildings in the Asterousia were then deserted, whereas the cemeteries of Kamilari and Hagia Triada remained in use until the MM III or even the LM I.

The desertion of old cemeteries from the Protopalatial period onwards has been observed throughout the island,\footnote{56} and the scarcity of Neopalatial funerary data suggests that most bodies were then deposited in ways that make detection difficult – e.g. burials at sea, or exposure of corpses to carrion feeders.\footnote{57} Such a phenomenon, which contrasts markedly with the abundance and elaboration of Prepalatial and Early Protopalatial cemeteries, has been linked to the displacement of the arena of social negotiation: the burial sites would have gradually lost their position as privileged settings for religious, ritual and social practices in favor of the palatial domain.\footnote{58} However, in the Asterousia, the abandonment of cemeteries is also related to modifications in the settlement pattern itself. Many habitation sites were deserted by the MM I, probably as the result of nucleation of population in some larger sites.\footnote{59}

\footnotesize{\begin{itemize}
\item Todaro 2003, 86.
\item Karantzali 1996, 83.
\item Due to the scarcity and confusion of EM III data in South Central Crete, this period is not considered here.\footnote{44}
\item Marinatos 1930–1931.
\item Sole 1992, 120–25.
\item Xanthoudides 1924, 93; Soles 1992, 193.
\item Watrous et al. 2004, table 10.2.
\item Goodison and Guarita 2005, 184–85.
\item Watrous et al. 2004, table 10.2.
\item Blackman and Branigan 1977, 58.
\item Vavouranakis 2007.
\item Marinatos 1993, 231; Rehak and Younger 1998, 110–11.
\item Peatfield 1990; Tyree 2001; Devolder 2009, 106–24.
\item Vasilakis and Branigan 2010, 267.
\end{itemize}}
GIS Spatial Analyses

Distribution of Built Tombs

As already stated, the majority of built tombs are concentrated in the Asterousia. The computation of Kernel Density Analyses further emphasizes the concentration of burial structures in the western part of the mountains (fig. 3). The large number of tombs recorded in the western Asterousia is mirrored by the high density of habitation sites, which is probably related to the intense coverage of the area by archaeological surveys. Several cemeteries organized around built tombs are also located along the north foot of the Asterousia. However, although tholoi are frequently named “the tombs of the Mesara”, few of them are truly located within the plain itself. This might simply be justified by differentiated conservation of the archaeological remains. Indeed, the Mesara plain is heavily cultivated and several structures, well preserved at the time of Xanthoudides’s excavations, are now completely dismantled. But on the other hand, the distribution pattern of built tombs might also be justified by the functions assigned to such structures.

Anthropological studies led by Saxe, Goldstein and Charles have suggested that the establishment of formal areas exclusively dedicated to the disposal of the dead can contribute to symbolize the group’s rights over a territory and “critical but limited resources”. That it is to say, lineal descent from the dead buried in the land would play a role in legitimizing the associated social group’s access, use and/or control of some resources (which can be the land). In this context, the close spatial association of circular tombs and arable land in the Agiopharango Valley is rather striking, and Bintliff suggested that the construction of burial structures in the area contributed to bond a particular kin group with the land it exploited. If the role of circular tombs as territorial markers could be confirmed, it would help justifying the lower density of built cemeteries in the Mesara. Indeed, in the fertile plain, where arable lands are not a limited resource, the different communities would not have felt the need to materialize so dramatically their bond with the land. However, let us not forget that some built cemeteries have also been recognized in the plain itself, amongst which is the large and long-lasting cemetery of Platanos.

Another striking gap on the density maps concerns the absence of built tombs at both Kommos and Phaistos, two areas with high concentrations of occupation sites. Generally speaking, not a single burial site has been identified

60 Following Xanthoudides 1924.
61 E.g., Drakones (Xanthoudides 1924, 76).
63 Blackman and Branigan 1977, fig. 34.
with certainty in the whole area of the Kommos survey. By contrast, the Ieroditis Ridge is identified as the main Phaistian cemetery and circular tombs are known in the surroundings of Phaistos – i.e. at Hagia Triada, Kamilari and maybe also Petrokephali. A large burial deposit on the south slope of the Ieroditis Ridge, close to the church of Hagios Onouphrios, has sometimes been interpreted as the remains of a tholos tomb associated with the settlement of Phaistos, but no architectural traces corroborate this hypothesis. Nor is it convincing to assume that the circular

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**Fig. 4** Cumulative viewshed from the burial sites in use during the EM II period, in the Western Asterousia.

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65 Shaw and Shaw 1995.
66 Watrous et al. 2004, 226.
Built Tombs, Viewsheds and Settlements

Built tombs in South Central Crete were usually established on hill slopes. That is to say, although they were not concealed, they were not positioned on prominent peaks either. Only a very few were located on the summit or close to the summit of low hills, which prompted K. Branigan to affirm that “there appears to be no correlation between tomb location and prominent natural features or prominent locations in the landscape. In this sense one might say that the tholos cemeteries were not consciously related to the natural landscape at all, and were certainly not built to dominate it or to exploit it as an accessory to social domination”. Yet, topography is not the only parameter to take into account when trying to assess whether ancient man-made features could have functioned as landmarks: if prominence is to be explored in its totality, the visual structure of the landscape must be involved in the discussion as well. Accordingly, viewshed analyses were undertaken to recapture the position allocated to the dead in the landscape of South Central Crete. The methodology implemented was aimed at testing the hypothesis that Early and Middle Bronze Age cemeteries were settled so as to offer high visibility of their surroundings.

To avoid approximations, the analyses relied exclusively on burial sites identified with certainty and located with sufficient accuracy. The sample taken into account was thereby reduced to 39 built cemeteries. Each of them was studied independently: an area of 500 m radius was delimited around the site, 50 points were randomly selected within this buffer, and viewed analyses were computed individually for the cemetery and every single random point. In this way, the extent of the area visible from the tomb could be compared to the size of the viewedshed of the nearby random points. The whole process was run twice, first with a viewing radius of 50 km, then with a viewing radius limited to 5 km. The results of the analyses were revealing. In the case of the first sequence of analyses (i.e. with a 50 km viewing radius), ca. 60 % of the cemeteries fell within the average values obtained for the random points. As a consequence, one cannot claim that the cemeteries of South Central Crete were positioned so as to offer commanding views over distant areas. On the contrary, the results obtained with a viewing radius of 5 km illustrate a strong underrepresentation of the cemeteries in the lowest visibility values and a gradual overrepresentation towards high values, testifying thereby to a clear concern for visibility patterns on the part of the tomb builders. The contrasting results obtained by means of the two sequences of analyses are of great interest for they indicate that the visual control exerted by the burial sites concerned middle-range rather than long-range distances.

Moving to the man-made landscape, K. Branigan suggested that the tombs were given an outstanding place by being located in close proximity to settlements. According to his study, of the 29 tholos tombs for which a contemporary occupation site had been located in the vicinity, “fifteen are within 100m, twenty-four within 200m, and all but two within 250m”. The impression of strong proximity between the dwellings of the living and the earthly abode of the dead is further emphasized by the viewshed analyses indicating that the majority of the settlements recognized so far in the Western Asterousia were visible from at least one contemporary burial site (fig. 4). Of course, these analyses have to be refined by considering which settlements are discernible from which cemeteries, and vice versa. Nevertheless, these preliminary results support Branigan’s observation that proximity with the dead was deliberately created.

Conclusion and Prospects

The location of burial places is to some extent dictated by the attitude of the living towards death and the dead, and by the roles and functions assigned to the deceased. The investigation of the spatial criteria that were considered significant in the establishment of tombs thus has the potential to provide new insights into funerary behaviors and

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68 Watrous et al. 2004, 226; McEnroe 2010, 55. Indeed, the tombs of Hagia Triada and Kamilari are quite far from Phaistos, and traces of settlements have been recorded in their immediate vicinity.
70 E.g. Christopherson 2003.
71 Branigan 1998.
meanings of a particular society. Accordingly, this paper attempted to give an overview of how spatial analyses relying on GIS technologies can be of help in reaching a better understanding of the Minoan mortuary landscape. However, it was only concerned with preliminary results of an ongoing research. The analyses presented here are simple and do not pay tribute to the great possibilities that GIS offer to the archaeological research. In the near future, more analyses will be undertaken.

First of all, there is probably much to be gained by refining the spatial and chronological distribution of tombs. In this context, it is important to take into account not only the modifications in the general distribution of cemeteries, but also changes within the cemeteries themselves, i.e. the construction of new structures, the further elaboration of existing buildings, as well as the abandonment of old tombs. The mortuary landscape should also be correlated to the evolution of the settlement pattern. For instance, it would be extremely valuable to connect modifications in a cemetery to contemporary changes observable in the size and organization of nearby occupation sites. Unfortunately, Pre- and Protopalatial settlements are mostly known from archaeological surveys, which can only provide approximate information regarding their date and extent. On the other hand, the results of surface surveys are very helpful in defining spatial and visual relations between cemeteries and occupation sites. If the environment of ancient societies cannot be reduced to the archaeological sites themselves, settlements occupy a central place in the daily life of sedentary communities. The connections between cemeteries and settlements are thus essential to evaluate the level of integration of the deceased into the daily life of the communities.

Yet, even if Minoan traces come mostly from occupation sites, topographical and environmental parameters can be combined to predict some of the movements and activities of the people in the past. The apparent association between built tombs and arable land in the Agiopharango offers a stimulating field of research. On the basis of information related to slope, geology, land use and soil depth, GIS can be used to define areas suitable for cultivation, and from there, to test the hypothesis that the establishment of cemeteries played a role in the appropriation of territory.73 Similarly, cost-weight analyses based on terrain data make it possible to compute the most cost-effective connections between different sites,74 which makes it possible to check if built tombs functioned as landmarks along the communication network.

Each of these analyses may help to shed light on the place allocated to the dead in the wider landscape of Bronze Age Crete. However, they cannot be taken as meaningful by themselves, nor interpreted in isolation. It is only by combining several types of analyses, comparing different regions, and studying changes in the mortuary landscape within the frame of the global evolution of society that we can hope to reach a better understanding of Minoan funerary customs. In addition, it is beyond doubt that cosmological, religious and eschatological considerations had a major impact on the establishment of burial places. But since these considerations are particularly difficult to approach in the context of prehistoric studies, focusing on the tangible aspects of landscape (such as topography, natural resources and archaeological remains) does not appear to be such a bad point of departure.

73 Tomkins et al. 2004.
Bibliography


Capturing the Dynamics of Minoan Mortuary Space


Marinatos, S. “Δύο πρώιμοι μινωικοί τάφοι εκ Βορού Μεσαράς.” ArchDelt 13:137–70.


Scholars have often suggested that Minoan settlements were informally organized. This paper, however, employs Smith’s method for examining degrees of urban-planning, which includes an assessment of a coordination of buildings and spaces and standardization within a number of contemporary settlements, to show that some parts of Minoan settlements were highly planned.

Moreover, it appears as though planned elements of Minoan settlements were often instituted with the specific goals of displaying the wealth and power of central authorities as well as building and promoting community identity.

Introduction

In this paper, I apply Smith’s comparative model for assessing the nature of urban-planning in ancient societies to Minoan Crete. I have chosen to do so because Smith’s model provides a holistic approach to examining ancient urban-planning wherein all features of the settlement are considered. Perhaps the most useful facet of this model is that it offers a suitable framework for understanding the multiple levels of meanings that were encoded within a settlement’s built environment. This is, of course, in stark contrast to description-heavy models that concentrate on building situation, materials, techniques, and form. While useful, these approaches often view built environments as “meaning-free”. Since the design and construction of buildings is an activity wherein many decisions are made, this is the very antithesis of “meaning-free” architecture. Working within this framework, I argue that some elements of the Neopalatial settlements of Galatas and Gournia were meaningfully planned.

Planning itself can take place at a range of levels, from the almost casual to the explicit and deliberate. In an effort to tackle this very problem, Smith argues that planning may be assessed through an analysis of the coordination of buildings and spaces within an urban environment, and by the relative degree of standardization that exists between cities of the same culture. A coordination of buildings and spaces can be broken down into three parts, including 1) arrangement (simple coordination); 2) formality and monumentality; and 3) access and visibility. Standardization is discussed in terms of common architectural inventories, spatial layouts and orientation. By applying Smith’s model we can move away from descriptions of urban planning based on simple presence/absence variables. Instead, through comparison one is able to assess the relative degree of planning present. Attention may then be directed towards determining the reason(s) for this activity.

In many cases the individuals who have the most significant impact on urban design and planning are those with the means or abilities to control the materials and human labour needed for construction projects. It is these people, those who comprise the central authority or belong to the elite class, that tend to have a need for expressing messages related to identity, status and power. Due to this, these individuals may construct, manipulate and modify parts of a settlement’s built environment in order to exhibit and, consequently, promote their own rank and power. Indeed, the city serves as a power base, and as a venue through which to communicate that power. Additionally, in an effort to rule more effectively, the built environment may be utilized as a medium to propagate messages.

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2 Locock 1994, 2.
3 Locock 1994, 3.
4 Smith 2007.
7 Smith 2003.
encouraging community and group identity for the purposes of establishing social cohesion and stability. It may, therefore, be used as a tool to both reproduce and transform social roles within society.\textsuperscript{9} Serving as a form of materialized ideology, the built environment acts as an instrument of social stability and change.\textsuperscript{10} Cities, then, may be conceived of as physical actors as the spaces within them are active, serving as venues through which social relations are structured and maintained.\textsuperscript{11} Because the buildings and spaces of a city are the products of deliberate and strategic planning undertaken by specific individuals, personal agency is at play.\textsuperscript{12}

In light of the foregoing discussion, I would argue that certain parts of Minoan settlements were well planned by elite individuals, perhaps those belonging to the ruling class, for the purposes of legitimizing and constituting authority.\textsuperscript{13} Additional attention was also directed towards promoting group identity in order to ensure social cohesion and stability, both of which are important elements of effective rule. In order to demonstrate that Minoan settlements were well planned with a view towards promoting these messages, I have chosen to examine the Neopalatial settlements of Galatas and Gournia (fig. 1).

**Galatas and Gournia: Topographic Situations and History of Research**

Located inland in central Crete in the Pediada, the settlement of Galatas was constructed on a long ridge (the *Kephala*), overlooking the Karteros River at its base and extensive fertile plains on its northern, western and southern sides (fig. 2). The excavated area of Galatas is quite small but a recent survey of the area suggests that at its height in the MM IIIA–B period, the settlement may have occupied an area of around 25 ha.\textsuperscript{14} Gournia, which is located a short distance from the Bay of Mirabello on the northern side of the Isthmus of Ierapetra, is situated near a river, and overlooking a fertile plain below (fig. 3). Its excavated remains total nearly 2.5 ha in area. Although somewhat

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\textsuperscript{9} Knapp 1988, 139; DeMarrais et al. 1996; Hillier 1996, 222.

\textsuperscript{10} Miller and Tilley 1984, 8; see also Whitley 1998, 17; Mumford 2003; Preucel and Meskell 2004.

\textsuperscript{11} Giddens 1979, 202; 1984.

\textsuperscript{12} Dobres and Robb 2000, 8–9.

\textsuperscript{13} In this paper I am only concerned with top-down planning. I do recognize that planning within an urban environment takes place at multiple levels and involves many different social groups and institutions.

\textsuperscript{14} Buell (forthcoming a).
smaller than Galatas, the settlement of Gournia may have possessed an area of upwards of 20 ha.\textsuperscript{15}

Excavations conducted by G. Rethemiotakis between 1992 and 2010 have revealed a clear stratigraphic sequence at Galatas.\textsuperscript{16} Data from the Galatas Survey Project (G.S.P.) has supplemented our knowledge of the site and its hinterlands. Excavation and survey attest to some use of the Galatas Kephala as early as the EM I-IIA period, while the first architectural remains belong to the MM IB period.\textsuperscript{17} Following a period of abandonment in the MM II period, the settlement of Galatas, including the palace and several excavated structures (e.g. Buildings 1, 3, 6 and 7), was built anew in the MM IIIA period on the remains of the earlier MM IB settlement.\textsuperscript{18} Following a destruction at the end of this period the palace and most other edifices on the Kephala were rebuilt in the MM IIIB period. Apart from the buildings that have been excavated, the G.S.P. has identified the remains of a number of other structures within the settlement. Unfortunately, a precise date cannot be assigned to these but based on associated surface pottery many seem to be contemporary with the MM IIIA–B palace. By the LM IA period parts of the settlement were in decline as several buildings and spaces, including some within the palace itself, fell out of use.\textsuperscript{19} The town was abandoned sometime in the LM III period. Since Galatas has a clear building history, one where the settlement was built rapidly, occupied for a short time and then abandoned, it serves as a good basis for comparison to other Minoan settlements.

Our understanding of the chronological development of Gournia is less precise than that of Galatas. Excavations conducted by H. Boyd Hawes over a period of three years in 1901, 1903–1904 revealed some 64 houses, a palace and parts of an early cemetery.\textsuperscript{20} Recent survey work and ongoing excavations continue to supplement our knowledge of the settlement and its development through time.\textsuperscript{21} Although Neolithic remains were found nearby on the hill of Sphoungaras, our first evidence for occupation of Gournia dates to the EM II period as attested by deposits under later structures, burials in rock shelters and at least one built tomb on the northern spur of the ridge.\textsuperscript{22} Due

\textsuperscript{15} Watrous and Schultz (2012, 58) claim that the inhabited area of Gournia was 3 ha. The actual excavated area is 2.5 ha. As Watrous’ (2012) recent work on the Gournia harbor suggests, as well as the actual spread of sherds recorded by the Gournia survey (Watrous and Schultz 2012), the settlement may have been as large as 20 ha. See also Driessen (2001, 63) for a similar observation.


\textsuperscript{17} Rethemiotakis 1999a; Rethemiotakis and Christakis 2004; Rethemiotakis and Christakis 2011, 195; Buell (forthcoming a).

\textsuperscript{18} Rethemiotakis and Christakis 2013, 93–5.

\textsuperscript{19} Rethemiotakis 2002, 63; Christakis 2008, 50.

\textsuperscript{20} Hawes et al. 1908.

\textsuperscript{21} Buell (forthcoming a).

\textsuperscript{22} Hall 1912, 46–8; Soles 1979, 150–51, 156.
Minoan Cityscapes

Fig. 3 The settlement of Gournia (redrawn and adapted from Fotou 1993, plan B).

...to a number of ceramic deposits and scattered architectural evidence, including Houses Aa, Ek, one below Ca and the House Tombs, it seems as though the settlement was occupied during the Protopalatial period. Unfortunately, at this point in time we cannot comment on whether or not the Protopalatial town was laid out in a similar manner to that of the later town. It is, however, likely that several parts of the street-system predate the Neopalatial settlement as there are many spots on the site where the street runs underneath later Neopalatial structures. Parts of this street-system may, thus, be contemporaneous with the Protopalatial remains.

Most of the excavated settlement dates to Hawes’s “Town Period”, which she divided into two phases, an early (MM III–LM IA) and a late one (LM IB). The first Town Period ended with a destruction and was followed by a period of rebuilding (i.e. the late Town Period). According to Hawes, the palace was constructed in the LM IA period, and then refurbished and expanded in the LM IB period. Through careful consideration of the palace’s architecture, Soles suggests that the southern wing (Rooms 13–18), the south steps and the west façade of the palace belong to the later period. This date has been verified by a study that sourced the sandstone ashlar blocks used in the palace refurbishment to a quarry at Mochlos, which only opened during the LM IB period.

Determining the chronology for the rest of the buildings on the site is more problematic as neither a detailed architectural study, nor a contextual analysis of the material remains has been conducted. It is generally accepted that most of the edifices at Gournia were constructed in the LM IA period. Less clear, however, is what houses continued in use or were built anew in the following period. Hawes only comments on four areas with a LM IB occupation: the unexcavated house across from House Dd; House Ha; House Hf; and the palace. Using Hawes’s notebooks, however, which list partial house inventories, one can identify at least 33 houses containing archaeological evidence for a LM IB occupation. Added to this number should be houses Da, Db, and Dc, as Soles, recognizing

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23 Hawes et al. 1908, 2, 22, 38; Soles 1979, 151, 155; Soles 1992.
24 Hawes conflated the MM III and LM IA periods.
28 A detailed architectural analysis, including the creation of a precise and accurate plan, is currently being conducted by the author in association with John McEnroe (Hamilton College).
29 Hawes et al. 1908, 24; Soles 2002, 123; see also Driessen and Macdonald 1997, 215.
30 Watrous and Heimloth 2011, 200; see also Fotou (1993) who provides a general description of Hawes’s four notebooks.
parallels from Mochlos, identified LM IB materials within their assemblages.\textsuperscript{31} Recent excavations have also confirmed that the Pit House was constructed and occupied in this period. Given the above, I would suggest that there is good evidence for a LM IB occupation of around 37 houses. Following a period of renewed building activity on the site in the LM III period, the site was abandoned. Ultimately, I chose to examine the settlement of Gournia because it is our most complete excavated example of a Minoan settlement.

**Simple Coordination**

I begin my examination of Minoan urban-planning at Galatas and Gournia by looking at the simple coordination of buildings within these two cities. Simple coordination refers to cases where specific architectural features are arranged with reference to one another.\textsuperscript{32} At the macro-scale, many of the Neopalatial buildings at both Galatas and Gournia possess a common reference to the palaces, since they share a similar north-south orientation with the major axes of these complexes. Because the arrangement of the palaces themselves is dictated by their central courtyards, it is this feature which may be regarded as an important organizing component of these two settlements. Several buildings in Block E at Gournia, however, do not follow this alignment with the palace. Instead, the topographical situation here dictated the positioning of these structures as it is comprised of a narrow terrace with a sharp drop to the west. Even so, buildings at both sites that are positioned far from the palaces and in different topographic situations often maintain a similar alignment to the palaces. It may, therefore, be that buildings were constructed following a common orientation to the palace whenever possible, but sometimes local topography proved to be the decisive factor.

Neopalatial buildings at both Galatas and Gournia were also constructed with reference to street networks. Streets, which serve as connective architecture, form one element of the armature of urban environments. They provide coherence for different structures and they help to unite these same edifices, creating order within settlements.\textsuperscript{33} Although our evidence for the extent of the street-system at Galatas is quite limited, it seems as though a major artery of it ran north-south on the Kephala through the settlement and up to the palace. Indeed, Rethemiotakis states that large urban blocks with narrow alleyways between them were accessed by this street.\textsuperscript{34} At Gournia, where there is more evidence, the same is certainly true. It is believed that the main street ran up from the area of the harbour to the main settlement where it connected to the settlement’s primary street network.\textsuperscript{35} The network of streets at Gournia created blocks of ordered units of housing, while smaller interstitial streets and alleyways further delineated space and provided access to houses throughout the settlement.

Through the construction of an urban street-system, a central authority could direct individuals to spaces of social interaction where relationships are structured and enforced.\textsuperscript{36} At both Galatas and Gournia, the main street leads up to the palace before terminating at the central courtyards. Since the streets ended here, these complexes could be viewed as the most important destinations within their respective settlements. The central courtyards themselves can be envisioned as symbolic centres because they served as the major nodes of their respective cities. At both sites this was reinforced through the actual approach to the palace because as one travels towards it, one is constantly moving upwards in elevation, creating a visual effect wherein the palace is seen to be looming above the individual, and is thus made more imposing.\textsuperscript{37} That this effect was planned is suggested by monumental facades of either ashlar as at Galatas, or bright, white cyclopean blocks, as is the case for Gournia, facing the major approach to these palaces. Furthermore, the spaces in front of these facades were open, providing unobstructed views.\textsuperscript{38} Thus, the power and the prestige of these complexes were projected outwards to local inhabitants and visitors to these cities.

Besides the central courtyards, the street-systems directed individuals to other places of social importance, including a number of courtyards located outside the confines of the palace.\textsuperscript{39} These courtyards were built with

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\textsuperscript{31} Soles 2002, 128.
\textsuperscript{32} Smith 2007, 8.
\textsuperscript{33} MacDonald 1986, 256.
\textsuperscript{34} Rethemiotakis 2008–2009, 94–5.
\textsuperscript{35} Watrous 2012, 531, 533, figs. 3 and 17–8.
\textsuperscript{36} Cf. Lynch 1960, 49–62.
\textsuperscript{37} According to Rapoport (1990, 107) the use of higher elevation is a nearly universal non-verbal cue indicating status.
\textsuperscript{38} Cf. Letesson and Vansteenhuyse 2006, 93–4.
\textsuperscript{39} There are three courtyards, located to the south, north and west respectively of the palace at Galatas, while the palace at Gournia has one on its western and another, which is located to the southwest of the palace. It is to be noted that these areas are not technically
Minoan Cityscapes

specific reference to the palaces because they are all located on their peripheries and, indeed, are framed by their exterior walls. Serving as junctions or nodes within the urban environment, these subsidiary courtyards would have held prominence in the minds of travellers because of the special activities conducted within them, their close spatial connection to the palaces and their architectural elaborations as manifested by the elaborate ashlar facades of the palace’s exterior walls. Public though they may seem, streets serve a political role because the workings of the settlement are displayed by them and they are used as conduits by which people are directed to places important for structuring community. A symbolic value was also vested within their very existence, for their construction demonstrated the central authority’s abilities to plan effectively and to command both materials and human labour.

One final element with respect to simple coordination is that it appears as though there were separate districts of similarly designed buildings at both Galatas and Gournia. The palaces and their ancillary structures and spaces function as districts, operating as the epicentres of their respective cities. Serving as the seats of administration, ritual and display, these districts are architecturally distinct from others within the settlement. Outside of the monumental core, the arrangement of other districts at Galatas and Gournia may have been similar but this is hard to qualify due to extreme lacunae in the data. A number of large structures at Galatas (e.g. Buildings 3, 5, 6, and 7) and Gournia (e.g. Houses Ha and Hb) close to the palaces possess architectural elaborations, including the use of ashlar masonry, wall paintings and specialized rooms like Minoan Halls and Lustral Basins. Given these architectural niceties, it may be that these areas represent an elite residential zone. Proximity to the palaces, therefore, may have been an index of social standing. The large blocks of contiguous housing outside of the administrative district at Gournia served as the primary residential district of the settlement. Although our evidence is lacking, the same too may have been true of Galatas.

Formality and Monumentality

Formality refers to when buildings, spaces and their layouts are constructed in a clearly articulated fashion within directed space. Formality may be achieved through singularity, which is when certain qualities mark an element as remarkable, noticeable, vivid or recognizable, and through form simplicity, continuity, dominance, and clarity of joint. These qualities never work in isolation because when only one is present the total effect would require effort to identify and structure. Thus, repetition, redundancy and reinforcement are required.

Formality is recognized at both Galatas and Gournia in the construction of the courtyards within these settlements. It is obvious that there was a hierarchy of space as the central courtyards are somewhat restricted. As one approaches these spaces, the width of the street narrows, producing a funnelling effect, which may have limited the amount of people that could enter these spaces concurrently. The central courtyards at both sites are accessed by flights of steps, which because of the uneven ground levels would have limited visibility into these spaces. Due to the restricted accessibility and visibility into these courtyards, it is likely that only select groups of individuals, perhaps the elite class, used them. Elaborate architectural settings framed the central courtyards of both palaces, providing the open spaces with order and creating a boundary for the activities conducted within them. At Galatas, the central courtyard is enclosed by ashlar facades, with the northern one being the most elaborate, possessing a tripartite form and stoa. The façade facing the northern side of Gournia’s central court is different from that at Galatas as it consists of features including pillars, an elaborate staircase, ashlar masonry in the intervening spaces, and, perhaps, horns of consecration above. Another deviation from the situation at Galatas is that Gournia’s central court lacks well-built walls on two of its sides; the eastern and southern sides. The exterior walls of Houses

courtyards, rather, they are plazas. The reason for this is that they are not bound on all sides; see Preziosi (1983, 107) for further discussion on this matter. The usual designation, however, will be used in this paper.

Cf. Lynch 1960, 50–1.
Districts are large areas, which are usually separated and defined by homogenous architecture, and which possess some sort of social identity (Lynch 1960, 66; Smith 2010, 140).
Cf. Park et al. 1925.
Kostof 1992, 74–5, 82; Smith 2010, 140.
Steinhart 1999, 5–12; Smith 2007, 12.
Lynch 1960, 108.
Rethemiotakis 2002, 58.
Hawes et al. 1908, 25.
Ha and Hb serve as the western border of the courtyard. Parts of these walls were fairly lavish in that their foundations were constructed from large monolithic blocks. In addition, ashlar masonry may have been used on this façade as blocks appear on these houses’ northern and eastern sides.\textsuperscript{51} Given their central function within the urban plan of these two sites, their restricted access and visibility, and their elaborate architectural settings, these courtyards were clearly important spaces of social interaction.

At Galatas there are deposits within close proximity to the courtyard that contain drinking, pouring, and serving vessels, along with faunal refuse.\textsuperscript{52} This, taken with the fact that the central courtyard was closely connected to spaces within the palace devoted to cooking, storage and dining suggests that there was relationship between the activities conducted within the courtyard and feasting, an event which is often connected to ritual or ceremonial behaviour.\textsuperscript{53} Unfortunately, however, we do not have the same level of evidence at Gournia for these activities as a complete inventory of all materials found within the palace does not exist. With this stated, recent excavations within the palace area at Gournia have uncovered two large feasting deposits, dated respectively to the MM III and LM IB periods, in room 13.\textsuperscript{54} These deposits may represent the refuse from feasting events held within the courtyard south of the palace. Relationships between local elites, those permitted into the central courtyards, and other segments of society were stressed and reaffirmed through the process of exclusion. At the same time, the inclusive nature of these ceremonies would have promoted a sense of group identity and community within the elite class.

Access into Galatas and Gournia’s other courtyards was unrestricted as the major street systems led directly into and through them. We can, therefore, infer that these were public spaces.\textsuperscript{55} All were formally designed because they are comprised of large open areas, which are clearly articulated in space and all are faced by at least one of the palace’s exterior walls. For travellers within these cities the contrast between the compressed streets lined with house facades and the open areas of the courtyards would have been dramatic. Breaks in transportation would have forced individuals to make decisions, and, as a consequence, attention would have been heightened and nearby elements would have been perceived with more than normal clarity.\textsuperscript{56} One component in particular that would have been noticed is the dramatic change in architecture from house walls to the palace’s exterior facades. Palyvou astutely draws attention to the fact that space (e.g. the courtyards) was needed in order to appreciate these facades.\textsuperscript{57} This is best illustrated at Gournia where ashlar masonry only appears on the western wall of the palace in the areas of the western and south-western courtyards. The changes to space and architectural setting would have signified that there was to be a change in activity, perhaps, as is commonly believed, those connected to ceremonial events, including public festivals.\textsuperscript{58} In short, these public places were constructed to host structured activities. As Kostof would argue, their structure reflects the structure of the activities, those which surely promoted group identity and ensooned community.\textsuperscript{59} The palace’s sponsorship of these events and, consequently, its regulation of activities, is clear given the nearness of the palace to these courtyard, and the presence of the ashlar facades.\textsuperscript{60}

Formality can be combined with monumentality, the principle defining feature of which according to Trigger, is that both a building’s scale and elaboration exceeds its utilitarian or practical functions.\textsuperscript{61} Through the control and conspicuous consumption of the materials and human labour utilised in a building’s construction, power relations are both displayed and reinforced.\textsuperscript{62} Monumental architecture is therefore indicative of an unequal control of various resources and, hence it points towards an asymmetric distribution of power within a particular society. Besides the scale, elaboration and cost of monumental edifices, Moore suggests that they share a number of

\textsuperscript{51} See Soles (2002) who suggests that these two structures may have, in fact, been part of the palace, forming the western wing of the complex.
\textsuperscript{52} Rethemiotakis 1999a; 1999b; 2002, 56–7.
\textsuperscript{54} Watrous et al. (forthcoming).
\textsuperscript{55} See Palyvou (2002, 2004) who comments on the public nature of the west courts, specifically.
\textsuperscript{56} Lynch 1960, 72–3.
\textsuperscript{57} Palyvou 2004, 214.
\textsuperscript{58} Marinatos 1987.
\textsuperscript{59} Kostof 1992, 124.
\textsuperscript{60} See also Hägg (1987) for a convincing argument regarding the palace’s involvement in certain activities of Knossos’s west court.
\textsuperscript{61} Trigger 1990, 119.
\textsuperscript{62} Trigger 1990, 124–25, 128; Dovey 1999, 15–6.
other qualities, including permanence, centrality, visibility and ubiquity. It is these qualities that enhance the monumentality of buildings within the urban cores of Minoan cities.

As discussed earlier, the monumental edifices of Galatas and Gournia were conspicuous to those both living within these settlements and outside of their confines because they are situated in the most prominent parts of their respective settlements. In this way they served as show-pieces for those who were responsible for their construction. The relative cost of these structures was reflected in all stages of their creation, as well their continued maintenance. Prior to their creation, for example, suitable building space was required. Preparation included the levelling of ground, a time-consuming and expensive endeavour, and the construction of terrace and retaining walls for purposes of support. At Galatas this is especially noticeable as an extensive system of terrace walls was created to support the northern and eastern wings of the palace. Central planning is implied by the length (e.g. upwards of ca. 30 m at Galatas and 20 m at Gournia) and straightness of some of the more utilitarian walls at both sites. Given the size of both of the structures (e.g. ca. 3,600 m² at Galatas and ca. 1,850 m² for Gournia), considerable volumes of stone for foundations and mudbrick for their superstructures was required. This implies a considerable economic investment in both human labour and building materials.

Messages connected to rank and power were also conveyed through the use of the fine and elaborate materials used in the palaces’ construction. Ashlar masonry, for instance, was used in the most conspicuous areas of both palaces. It was used at Galatas on the palace’s exterior walls, main feasting/reception areas (e.g. the Pillar and Columnar Halls), and in the residential halls of the north wing. The situation is similar at Gournia, although ashlar masonry was used more sparingly and added at a later date during the LM IB refurbishment. Here, ashlar facades were constructed on the north and north-west sides of the central courtyard, on the western wall of the palace in the areas of the courtyards, and in the central hall. Stone used for ashlar blocks at both sites was brought in from considerable distances, thus implying a substantial cost. The limestone used at Galatas was quarried from the area of Alagni, which is a distance of 4 km away, while the sandstone used at Gournia came from the quarry at Mochlos, a distance of 12 km.

Other specialized materials and construction techniques, including the use of non-local stones for pillars, column bases and door jambs and the construction of elaborately paved floors, were utilized as a means of further enhancing the monumentality of these complexes. All of the areas that employed specialized materials and construction techniques were highly conspicuous ones where visitors participated in a number of special activities. At Galatas, all of the rooms that were well decorated (e.g. the Pillar, Columnar, and Minoan Halls) were situated close to cooking spaces, storage areas, or areas where eating and drinking paraphernalia was stored. The close spatial proximity to these spaces and built features suggests that these halls may have been the loci of small-scale eating and drinking activities. The architectural elaboration of these spaces, therefore, would have served as a material agent, one that complimented the specialized activities within these spaces.

It is clear that a considerable workforce would have been required for the monumental construction projects at both Galatas and Gournia. Indeed, we might infer that the palaces employed workforces comprised of both attached craftsmen and independent labourers, perhaps some of which were drawn from some form of corvée system. Through the participation in these construction projects these individuals may have developed a sense of identity with both their settlement and their ruler. Thus, both community and political legitimation and support from their subjects were created through the very act of constructing these monumental edifices. In other words, these projects may have helped to bind subjects to their rulers.

**Standardization**

I conclude my examination of Minoan urban planning by looking at some standardized elements present within Minoan settlements. The presence of similar buildings, layouts, and other urban features in a series of related cities

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61 Moore 1996, 139–41.
62 Driessen 2004, 75.
65 Several authors, including Cavanagh and Mee (1999), Fitzsimons (2006), and Devolder (2009), have recently employed Abram’s (1989) concept of architectural energetics to the prehistoric Mediterranean. These studies are useful because they quantify the level of human energy and, thus, cost in all facets of a monumental edifice’s construction.
66 For Galatas, see Rethemiotakis (2002, 6) and for Gournia, see Soles (1983).
suggests adherence to a common plan or idea of urban-planning. The palaces of Minoan Crete repeat specific features of plan, design, construction and decoration. Superficially, they were organized in much the same way with four architecturally integrated wings surrounding a central courtyard. Galatas conforms to this pattern, whereas Gournia does not. Although there is a large central courtyard with dimensions of roughly 2:1, as is typical of the other palaces, the complex at Gournia does not possess four architectural wings. Even so, there were spaces where all of the features typical of Minoan palaces, including administration, reception, storage, and ritual, were conducted. Gournia’s complex is, therefore, similar to other palaces because it functioned in the same way and it was equipped with similar spaces, serving as dependencies or ancillary rooms to that of the central courtyard.

There is some degree of variability in the arrangement of spaces within the palaces. Storage areas, for example, were usually located in the western wings. Gournia’s storage areas are located on the western side of its palace, while those at Galatas are located in its eastern wing. Likewise, rooms associated with ceremonial activity are normally found in the western wings close to storage areas. The situation is somewhat reversed at Galatas where either the Columnar Hall or Pillar Hall, both of which are located in the palace’s eastern wing, fulfilled this role. At Gournia, the central hall performed this function. Minoan Halls, which were normally the best-built and decorated areas within the palaces, appear in different locations and are often of disparate sizes. Those at Knossos are in the eastern wing of the palace, while those at Malia, Phaestos and Galatas are located in the north. Comparable suites of rooms may have been situated in the northern part of Gournia’s complex (e.g. rooms 28–29), but the evidence is lacking.

Several scholars, most notably Driessen, have commented on the high degree of standardization apparent in certain aspects of Neopalatial architecture. In brief, we see Minoan builders utilizing the same tools, techniques and materials and constructing similar architectural features the island over. For example, the use of pier-and-door partitions, gamma- or T-shaped door jamb bases, drainage systems, stylobates and wooden supports within walls become widely proliferated in both private homes and monumental buildings during the Neopalatial period. Another is the increased use of ashlar masonry, which itself becomes a form of standardization. Not only does ashlar masonry come to be used more often in the palaces but it is also seen in the private residences of all cities, and here Galatas (e.g. Buildings 1, 6 and 7) and Gournia (e.g. Houses Ha and Hb) are no exceptions. Specialized rooms, including both Lustral Basins and Minoan Halls, were constructed with increasing frequency during this period as well. With respect to the latter, although one house at Gournia, Ha, contains a Lustral Basin, no Minoan Halls appear on the site. There are, on the other hand, several examples of both at Galatas. Ultimately, the presence of this basic inventory of architectural features found within different Neopalatial cities suggests, as Smith would argue, the use of some common plans or ideas about urban form.

Although the evidence is often slight, it seems as though the settlements of Neopalatial Crete employed common spatial patterns in their design. Public architecture was often concentrated in one central district in a prominent part of the settlement. Immediately outside of this one might expect to find the residential units of the settlement. Communication between all of the various parts of these settlements was provided by well-built street-systems, which also, as at Gournia, provided the settlement with order by creating blocks for residential units. In many cases, perhaps all, it seems likely that streets were primarily laid out during the Protopalatial period. Further, the street-systems of all cities directed individuals to a number of subsidiary courtyards before terminating at the central administrative districts. That street-systems were well planned is evident not only at Gournia, but so too at Knossos where the early street had priority over pre-existing structures because it had a standard width and...
construction, along with a high level of axiality.\textsuperscript{83} Again, it bears repeating that at present our evidence is quite limited. This is unfortunate because the presence of common spatial patterns within related cities provides strong evidence for urban planning.\textsuperscript{84}

Six of the seven Minoan palaces (Knossos, Malia, Phaestos, Petras, Galatas and Gournia) were constructed following a similar north-south orientation. Further, as is the case at both Galatas and Gournia, many other structures within these cities follow an alignment with the palace. That topography was not the single defining factor of orientation is best illustrated by Blocks D, E, and Z at Malia. Because the local topography is relatively flat at Malia, builders were not limited and chose to construct edifices that were aligned with the palace, and, as a consequence, its central courtyard.\textsuperscript{85} In light of the foregoing discussion, it is posited, despite oftentimes incomplete information, that the Neopalatial settlements of Minoan Crete shared standardized elements of urban design.

**Conclusion**

As a result of our better understanding of Galatas’ developments, although only published in preliminary fashion, we are in a position to examine how Minoans conceived of urban-planning from the outset as this settlement was built rapidly on nearly virgin soil. Thus, through comparison of both Galatas and Gournia, we are able to develop some understanding, although, admittedly, quite limited, as to how the Minoans conceived of and planned their cities. By looking at the coordination of buildings and spaces, along with elements of standardization, one is able to develop some sense as to how much of the urban environment was planned. Although both centres clearly possessed highly planned epicentres, the architectural forms of which are different, but the functions identical, it is clear that other parts of these cities were also laid out with much forethought. This is particularly evident in the construction of certain amenities, including both streets and courtyards. The careful, calculated construction of these urban features affected the general lay-out of the cities under study and they, indeed, helped to structure them. We can therefore estimate that a significant proportion of each settlement was planned. With this stated, it is essential to remember that each one of these “planning events” was geared towards eliciting a response between builder and viewer.

The focus of this paper has clearly been on top-down planning rather than what Cowgill would call grass-roots self-organization, that which was based on the individual or neighbourhood level.\textsuperscript{86} This surely would have been present as residents sub-divided houses, and neighbourhoods built communal spaces.\textsuperscript{87} With respect to top-down planning, however, many elements of visible planning within Minoan cities were clearly directed with the intention of transmitting messages connected to identity, status and power. By doing so, individuals were able to promote and legitimize their positions within society. Further attention was devoted towards establishing a sense of group identity and community for the purpose of creating social stability and cohesion, both of which are important for effective rule. The clearest expression of these mid-level meanings derives from expressions of monumentality and formality, both of which, as we have seen, were prominent components of the urban landscape.

It must be stated that this paper only represents a preliminary look at Minoan urban planning. To say that much work needs to be done is an understatement. The approach outlined above needs to be further refined to take into consideration all of the variables that might dramatically affect conclusions. One of these, perhaps the most important, concerns changes that occur in settlement form over time. Time is, indeed, an important factor in this discussion, for it is crucial to understand how a settlement was originally planned, how it changed, and the motives behind these undertakings. Minoan cities would have experienced periods of both planned and unplanned growth.\textsuperscript{88} Even so, it is fairly apparent that certain elements of the original urban form persisted for some time. In addition, I believe that a more comprehensive, diachronic view, set against other contemporary socio-political developments, and comparing more Minoan cities would vastly increase our understanding of Minoan urban-planning and the levels of meaning associated with these events.

\textsuperscript{83} Warren 1994, 190.
\textsuperscript{84} Smith 2007, 26.
\textsuperscript{85} McEnroe 1979, 342.
\textsuperscript{86} Cf. Driessen 2010, 36.
\textsuperscript{87} Cowgill 2004, 537–38; Dietler and Hayden 2001, xi, 432 p.
\textsuperscript{88} Carter 1983, 10–2; Kostof 1991, 46–51.
Bibliography


Let’s Come Together

Places and Spaces of Social and Ritual Interaction
The Places and the Role of Consumption in MM II Phaistos

Giorgia Baldacci

The aim of this paper is to survey the places devoted to consumption in Protopalatial Phaistos, with a special focus on MM IIB, during which period a larger amount of data is available, considering in an inclusive reading both the pottery assemblages and the features of their find spots. The latter, on the basis (a) of the architectural patterns (for instance the presence of benches), (b) of their topographical location (in the palace or in the town area), and (c) of their position within the buildings to which they belong, could be considered as different physical contexts, where consumption episodes took place. These can be domestic, official or be placed in a mixed position as argued by the recent reconsideration of building CV–CVII, located outside the palace area, on the slopes of the Acropoli Mediana, where it is possible to identify a great hall (endowed with a long bench and with an alabaster slabs floor) specifically used to host consumption activities.

Introduction

Minoan palaces or, employing a more politically correct definition, court centred buildings have been variously considered as religious, economic, redistributive or production centres. While a general consensus has not yet been reached concerning the nature of the palaces, it can perhaps be agreed upon that palaces were important feasting and consumption centres already by the first phase. As far as Phaistos is concerned, the quantity and quality of the tableware from the Protopalatial period (MM IB–MM IIB) recovered are the most striking evidence of the food and drink consumption episodes taking place at the site. Despite the emphasis given to the study of vessels in Levi’s seminal publications, less attention has been paid to a contextual analysis of pottery assemblages as markers of these kind of activities. Only recently has greater attention been devoted to a contextual study both of the materials and of the architecture of the site. This paper applies this functional perspective and starts with the study of the Protopalatial building of the Acropoli Mediana at Phaistos, which I have carried out in the last years, where a room used to host consumption activities (CVII) has been identified. Moving from this case, the aim of my paper consists in reviewing the built places where food and/or drink consumption was particularly relevant at Phaistos. Several studies have highlighted the great social value of these kind of activities, especially (but not only) when placed inside public ceremonies. As a consequence, the case of MM II Phaistos, where both floor assemblages and architectural settings are preserved, offers a good opportunity to review the physical contexts where food and drink consumption took place and can provide information about “the variety of social distinctions, identities and values” that this activity reflects.

Archaeological Evidence

The main evidence for recognizing this kind of activities in the archaeological record is tableware (in particular drinking vessels, conical cups, bowls etc.) that (if not discarded) can be found either stored or in the exact place where it was used; at Phaistos, much ceramic material has been retrieved in situ, thus offering an opportunity
to carry out a contextual analysis. Other useful information about food consumption can usually be obtained by faunal remains,10 but the recovery of animal bones at Phaistos has been scantily recorded in site publications and the study is still in progress.11

For the Protopalatial phases preceding the end of MM II, due to the continuity of occupation, pottery is scarcely attested in its use-context.12 Nevertheless, for these phases, references to specific food and drink consumption activities may come to a certain extent from some foundation’s deposits13 and from a group of MM IB and IIA benches entirely built with whole vessels and ceramic material that had likely been sealed and ritually preserved.14 The situation is remarkably different for the end of the Protopalatial period (MM IIB). In fact, a great deal of ceramic assemblages remained in situ, both in the palace and in the town area, after the seismic events that led to the abandonment of the first palace in MM IIB.15 However, it must be stressed that, according to recent research, the MM IIB ceramic record from Phaistos belongs to two different major episodes in the site history.16 A first earthquake led to the destruction and abandonment of some parts of the palace; following this event, the “shrines” overlooking the middle West court (from whom the phase takes the name fase dei sacelli) and room LXIV in the South-West wing were built, and some major transformations affected the group of rooms LIX, LX, LXI, LXIII and LXV. The “phase of the shrines” was then interrupted by a second and final seismic episode.

Although MM IIB Phaistos can offer much information for a contextual analysis about the physical contexts in which consumption took place, the picture could be only partial, as some caveats must be considered:

1. Only part of the first palace is known, due to the partial superimposition of the second palace, and only some areas of the town have been explored. As far as the material is concerned, Pernier published only a selection17 while Levi mainly listed the preserved vessels that he had recovered;18

2. In the general economy of domestic spaces, the upper floors played an important role:19 apart from being only partially preserved, their identification (and the distinction of the relating assemblages) has been particularly complex at Phaistos20 and their use and function is difficult to define;

3. It is very likely that consumption episodes took place in outdoor spaces, in public or private settings.21 In the site of Phaistos, as well as in the other palaces, a particular role should have been played by the palace courts, whose function in the Protopalatial period is far from clear.22 However, the middle West court, endowed with some special architectural features as kouloures, the so called theatrical area and causeways, was surely the setting for some kind of collective ceremony.23 Unfortunately, no direct proof has been recovered which attests to food and drink consumption episodes in this setting. Nonetheless, if this was the case, it is clear that they would have been of primary importance in defining the social identity of the participants;

4. Another major concern is the time element, as time is an important agent in defining the function of spaces.24 In fact, it is possible that the Phaistos rooms were used for activities different from those crystallized by the archaeological record at the moment of the final destruction.

10 See Hamilakis 2008, 5, n. 10.
11 For the Protopalatial period, only two major groups of animal bones are known at Phaistos: the one from the so-called fossa dei sacrifizi (Pernier 1935, 207) and the other from Palace room LXII (Levi 1976, 108). Another quite consistent group of faunal remains, now fully studied by S. Masala (Appendix in Baldacci 2010) came from the lower levels of room CVII of the Acropoli Mediana (in secondary deposition).
12 The only floor assemblage known preceding MM IIB is that of Haghia Photini, room β (Levi 1976, 636–44 and Caloi 2005).
13 In Protopalatial Phaistos the canonical foundation deposit is constituted by upside-down laring bowls (piattelli), which likely reflect a ceremony connected with food consumption (La Rosa 2002, esp. 46).
14 Baldacci 2011. The most striking cases are the deposits found in two benches, that of corridoio III/7 (Carinci and La Rosa 2007, 97–8; Todaro 2009, 128–30; 2013, 93–7), and that of room IL (Caloi 2012), which have been interpreted as the remains of feasting events.
15 La Rosa 1995.
16 Carinci and La Rosa 2001, 523–24; 2007, 86.
17 Pernier 1935.
18 Levi 1976; see also Levi and Carinci 1988, where part of the vessels listed by Levi is discussed on typological basis.
19 For some theoretical problems, with a special focus on LM I architecture, see Hallager 1990; Michailidou 1990.
20 As far as the palace is concerned, Levi interpreted the three levels that he recovered in the South-West wing as the remains of three chronologically distinct buildings (in other words, the three phases that he identified were both architectural and ceramic). This reconstruction, highly criticized by scholars who thought that the three levels corresponded to different storeys (for a summary of the question, see Van de Moortel 2006, 267–70), has now been definitively abandoned (Riva and Signorini 2001; Carinci and La Rosa 2007).
21 For a theoretical discussion about the role of the non-built spaces and their public and private status, see Palyvou 2004.
22 See Militello 2012, esp. 235–56.
23 Marinatos 1987; Carinci 2001, 58–60; see also Hitchcock 2000, 63–8.
24 See Palyvou 2003, 226 and, with a special focus on formation processes, La Motta and Schiffer 1999.
A. The Palace

The Phaistos palace functions have yielded much discussion; however it seems clear that a general difference existed between the North-West quarter, excavated by Pernier, and the South-West quarter, excavated by Levi (fig. 1).\textsuperscript{25} The assemblages and patterns of circulation of the latter area have been recently re-assessed by Carinci, who underlined, especially for the two northern blocks, strong religious and ritual connotations, linked to the activities of a small high status group.\textsuperscript{26} Conversely, the North-West quarter seems to have had a more “economic” function, connected to storage, administration and resources transformation. Only in the last MM IIB phase of use (“phase of the shrines”) is it possible to detect a specific cultic function in this area as well, as attested by construction of the shrine complex overlooking the middle West court.\textsuperscript{27}

A.1 The South-West Quarter

In the final Protopalatial phases (MM IIB), the South-West quarter is organized in three blocks, each provided with its own access to the lower West court (piazza LXX).\textsuperscript{28} Every block has access corridors or rooms, junction rooms and, in the easternmost part, rooms with more specific and differentiated functions.

\textsuperscript{25} Militello (forthcoming). For the publication data, relating to the two areas, see Pernier 1935 and Levi 1976.
\textsuperscript{26} Carinci 2006; see also Palio 2008, 207–21.
\textsuperscript{27} Pernier 1935, 195–208; see also Gesell 1985, 123–24.
\textsuperscript{28} On accesses to the lower West court and their changes in time, see Tomasello 1999; Carinci 2006, 24.
The first point to be underlined is that the access corridors (L, LVI – direction North-South) and junction rooms (LIII, LVIIIa) were not simple passage areas. In fact, each of these rooms was endowed with fine finishes (alabaster slabs), one or more benches, and a cupboard (so called doulapa) used to contain a small amount of vessels. Among the vessels recovered in the rooms, containing and pouring vessels are always represented and, with the possible exception of corridor L, some fine ware cups and/or conical cups. The architectural features and the assemblages recovered in these corridors and rooms show that they were areas actually used as waiting or control points before entering rooms which had restricted access and held a more specific function. The structured presence of vessels used to contain, pour and drink liquids hints at small-scale consumption activities, connected to the management of palace circulation.

In the northern block of the South-West area two rooms are located, IL and XXVII–XXVIII, which have been recently re-studied by Carinci, as far as space articulation, circulation patterns and ceramic assemblages (relating to the three different floors) are concerned. The rooms contained a large amount of MM IIIB pottery. In room IL several pottery groups have been distinguished: the first one is associated with the large bench built on the North and comprises vessels used to prepare and cook food; other ceramic material was associated with the South side of the room and includes spouted jars (small and large-sized); two pithoi were at the centre. In general, drinking vessels are extremely rare. Thus, it seems that the room was primarily connected to preparation of food and drink that was consumed elsewhere. Room XXVII–XXVIII was used as a specialized deposit. It contained more than 150 vessels distributed in various groups, in part fallen from shelves: besides a concentration of middle and large-sized containing vessels and two pithoi, the majority of the groups, found in the western and central part of the room, are composed of drinking vessels (especially fine ware cups) and of containing and pouring vessels. In general, this block of the SW quarter seems to be concerned with the storage of materials and with preparation activities, more than with food and drink consumption, which could take place elsewhere (in the upper floor? in the court?).

The central block of the South-West area comprises, to the East, two sectors: rooms LV and LXII, accessible also from the upper floor, as well as LI and LIV. Room LI is a sort of a small antechamber, with various functions. A small quantity of ceramic and stone vessels were laid on two shelves; the room was also a small administrative archive containing, according to Militello, inscriptions of a religious or legal character, linked to rites or offerings. The antechamber function is probably linked to the activities that took place in next room LIV. Room LIV architectural and structural features (alabaster slabs on the bench, painted floor and walls) underline its particular prestige. Moreover, in this room, a grinder for cosmetics and various stone vases have been found. A stone cup was found on the bench, while a group of vessels was found on a slab at the foot of the bench, comprising small vases.
(an alabaster cup, a bird’s nest bowl used as a rhyton, a small teapot and a small jug). The connection to room LI, where some tableware was stored, and the presence of the two stone cups hints at the fact that some consumption activities took place here: however, they should involve a small number of individuals, perhaps only one. Several scholars agree a ritual function for the room can be recognized:42 if this was the case, it is likely that consumption took place in a peculiar setting, as seems possible to suppose given the room configuration, its furnishings and the fact that only stone drinking vessels were recovered.

The other nucleus of the central block is constituted by rooms LV and LXII.43 The first one is characterized by a low bench, running along the four sides of the room. From it come a good deal of ceramic materials, as well as some stone vases,44 found inside a doulapa. Drinking vessels are completely absent, with the exception of a single stone cup. The material, as a whole, seems to be meant to collect, filtrate and mix liquids, but not for drinking practices.45 The next room, LXII, was large and only partially preserved, due to the superimposition of the later LM palace. It showed prestige features (painted stucco on the walls)46 and in the North sector a ring-hearth was present, filled with burnt animal bones. The presence of the hearth,47 the large size48 and the position of the room, hint at the fact that it could be an open one, perhaps a sort of light-well.49 Considering that only the room’s westernmost zone was dug, a good quantity of pottery has been retrieved: the material found in the destruction levels comprised of more than 20 conical cups and a small amount of fine ware cups;50 two stone cups were also found.51 On the basis of the available data, the room seems to have been used to prepare meat and to consume food and drinks.

The South block of the quarter,52 which also included a store where about ten pithoi stood,53 shows some important reworkings in the “phase of the shrines”:54 in this phase, room LXXIV was built and the others were re-used. Room LIX,55 in its last phase of use, opened on to the lower West court, accessible by a five-step staircase; the entrance was controlled by a double-door system. The room is quite large56 and endowed with a bench running along three sides, which could be used as a sitting device. A fair amount of drinking vessels (mainly conical cups) was recovered, along with some pouring vases and one cooking pot;57 a special function could be held by an ellipsoidal lactic bowl set in the floor, which could contain liquids.58 It is likely that the material recovered was actually used here and thus, it seems possible that, in the “phase of shrines”, the room had a function connected to consumption, perhaps also in relation to its use as access room.59

Room LX was quite humble and furnished with a four-side bench;60 the pottery included pouring vessels, cooking and preparation pots but, with the exception of a lip cup, vases used to drink or consume food are lacking.
The assemblage of room LXIV was mixed: containing a group of *pithoi* and *pithoid jars*, some jugs, and a small amount of conical cups and straight-sided cups. The meaning of the deposit is not clear and, in Carinci’s view, implies a reoccupation after the destruction of the rest of the South-West quarter, during which ceramic vessels and other items, which in part were recovered in the rubble, were then stored inside the room. In particular, the *pithoid* jars could be used towards restoring the building.

### A.2 The North-West Quarter

The palace area overlooking the middle West court, excavated by Pernier, comprises a smaller number of Proto-palatial rooms and, due to the poor conservation of the structure (caused by the LM palace superimposition) and to the high selection of the material published, a contextual study of the evidence is particularly difficult.

Accesses to this palace quarter which open on the West side, were also endowed with benches and contained small amounts of drinking and pouring vessels. However, they are not corridors, but actual rooms, in which other materials were also found that could be connected with specific activities: in particular, a set of pestles and grinders also comes from room X, while some gold sheets come from room XIX, XIV, XVI, XVII and XVIII are small storerooms, containing mainly tableware, but it is not clear where this material could be used.

In this wing, the most striking evidence connected to consumption is that from rooms V–VI and VIII–IX, which Pernier described as shrines. Rooms VIII and IX are more ancient, being included inside the original perimeter of the first palace; only later (MM IIB) was the façade opened and rooms V and VI were added. Thus, the complex should have been in use for a short time, namely between the first and second MM IIB earthquake, and it is possible that it took on, at least in part, some of the functions previously held by the South-West area. All the rooms were refined and were endowed with one or more benches, which could be used to lay objects or as seats. Room IX served as an antechamber to room VIII, which was the most important of the complex and was characterized by a large offering table/hearth set in the middle. In room V a bench was built, used as a grinder. North to room VIII moreover, the so called *fossa dei sacrifici* (sacrificial pit) had been cut in the bedrock, with a central cavity, and was filled with ashes, burnt animal bones, pots (in particular cups) and stone vessels.

It seems clear that the activities which took place in the shrines were focused on food preparation/cooking and on drinking. Anyway, it is possible that participation inside the rooms was limited, on the basis of their dimension and of the small amount of pottery recovered.

### B. The Town

Only part of the town of Phaistos is known: Levi uncovered some Protopalatial buildings to the South and West of the palace, at the slopes of the *Acropoli Mediana* and in the peripheral quarters of Chalara and Hagia Proteini (fig. 2).

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62 Pernier 1935.
64 Pernier 1935, 271–75.
66 All these rooms connect on a North-South axis and opened, to the East, to court/light-well XV and access room XIX: it is not possible to exclude that pottery was used here.
68 Carinci 2005.
69 The shrines overlooking the middle West court, due to their architectural organization they are counted among Cretan bench sanctuaries. On the rites taking place in the shrines and on the benches function, see Gesell 1985, 11, 120–24; 1987, 123–24; Marinatos 1993, 98–100.
71 Pernier 1935, 204–5.
72 Pernier 1935, 207–8, 217–18.
74 Palio 2008, 222.
75 Palio 2008, 222–23.
Although it is not possible to detect a standard situation, one can nevertheless state that in general, every room in which a pottery assemblage has been recovered, also included tableware, both plain and decorated. Rooms are small and the quantity of the material is limited;\(^\text{77}\) if a bench is present,\(^\text{78}\) often the pottery is piled up on it, without a functional distinction. However, it is possible to detect some different situations in the town, where pottery assemblages or architecture point to a more specific use of space.

First of all, in building LXXXI–LXXXV, XCIV–XC, located to the West of the middle West court, an enormous quantity of pottery has been recovered (more than 900 whole vases).\(^\text{79}\) In rooms LXXXIII–LXXXV and XCV a fair amount of tableware has been found (mainly cups and conical cups, with a small number of spouted jars): part of the assemblage could also have been used \textit{in situ}, but the rooms should also have been used for storage and for carrying out some domestic activities.\(^\text{80}\) However, the largest amount of pottery (more than 500 whole vessels) came from room XCIV: among this material, the number of spouted jars, cups, conical cups and jugs was particularly large.\(^\text{81}\) The small room, according to Speziale, was used to store pottery.\(^\text{82}\) As it is clear, the vessels found are not linked to the needs of a single household, and the fact that they showed signs of use hints at the fact that they could be used in a communal context.\(^\text{83}\)

Another striking case in the frame of Phaistos town is that of rooms CV–CVII of the Acropoli Mediana (fig. 3).\(^\text{84}\) The building, which is preserved only on its northern side, in MM IIB was composed of three rooms: to the West an elongated hall, with an alabaster floor and a long stuccoed bench along three sides (CVII), in the middle a stair-

\(^{77}\) A maximum of 5 painted cups, 11 conical cups and 10 flaring bowls is recorded in room delta – epsilon in Chalara: see Levi 1976, 666–69.

\(^{78}\) See the list of the benches in the town area in Baldacci 2011, 313, n. 3.


\(^{81}\) Speziale 2001, 162–64.

\(^{82}\) Speziale 2001, 162.

\(^{83}\) See Militello 2012, 256.

\(^{84}\) Levi 1976, 601–29; Baldacci 2010.
The Places and the Role of Consumption in MM II Phaistos

...case (CVI) and, to the East, another accessory room (CV). The latter two rooms were also used to store pottery: vessels were gathered, in particular, on the North side of the staircase and inside a built structure/cupboard in the North-East corner of CV. The whole assemblage comprised 105 vases; some of which should have fallen from the upper floor. The distribution of the vessels is not coincidental: all the plain pottery found in CV was stored inside the built structure/cupboard, while all the fine ware cups came from the floor area or had fallen from the upper storey; in room CVI it is also possible to detect the presence of some spouted jars and other painted pouring vessels not attested in the next room. If we consider the pottery recovered in the two rooms as a whole (fig. 4), as far as the tableware is concerned, the number of the cups is particularly high; if we consider, along with cups, also conical cups and lip cups the percentage of the pottery which could be used to contain liquids is striking (64%); a smaller amount of vessels, plain and painted, was used to pour; finally, another small amount of open containing vessels was present. Each of the two rooms contained a single jar and some lamps. Moreover, in room CV two fire boxes were recovered, which should have had a specialized function, likely as incense burners. Storage and cooking vessels are completely lacking. The ceramic assemblage should be used in the next room CVII and, if vessels were stored to be used, at least partly, in single circumstances, it is possible that a hierarchy in consumption existed, represented by the different quality of the artefacts: a larger number of plain drinking and pouring vessels alongside a smaller amount of fine and painted pots. A particular role in the hierarchy of consumption could have been played by a couple of similar painted hemispherical cups or by a MM IIA cup that imitates metalware. Other Protopalatial assemblages, which have been interpreted as indicative of a social distinction within the group of consumers, have also been found elsewhere in Crete, but outside their original context of use. Room CVII, from an architectural point of view, shows some contact points to the rooms of the palace and should have had a semi-official function inside the building. Benches allowed the meeting among a group composed of a number of individuals larger in comparison to that of a household group, on occasions connected to consumption, with a special focus on drinking, as is shown by the vessels recovered in the two next rooms.

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85 The exact location of the vases has been hypothesized on the basis of the daybooks, of the data relating to the inventoried pots and, for the sherds stored at the stratigraphic Museum of Phaistos, on the basis of the boxes' labels.
87 The fire-boxes' function has been much debated: see Evely 2000, 538–41.
88 An exact estimate of the ratio of plain pots to fine ones is not possible, as some vessels will have fallen from the upper storey (it is surely the case of the two egg-shell cups F 6147 and F 6148, see Levi 1976, pls. La, XLVIIa, XLVIIib, as is possible to argue on the basis of the find spots of the fragments).
89 F 6150b and F 6150c, from CVI (Levi 1976, pls. 124b, 125i; Levi and Carinci 1988, pl. 84i).
90 F 6211, from CVI (Levi 1976, 611, fig. 985; Levi and Carinci 1988, pl. 81i).
91 See the deposit A from Knossos Early Magazine A (MM IB), which however represents a pottery store or pantry (Macdonald and Knappett 2007, 161–65) and the deposit from Petras – Lakoss (MM IB) (Haggis 2007).
92 For its ample dimensions (8,50 x 1,80 m), its building technique and fine finishes (alabaster floor and bench, painted stucco).
Building CV–CVII is a unicum in Protopalatial Phaistos;\textsuperscript{93} however, in the town, another building stands out for its architectural features: room LXVIII, next to the South-West quarter of the Palace.\textsuperscript{94} It is endowed with a bench on two sides and an alabaster lining that also runs on the walls, above the bench. Unfortunately, due to the superimposition of later buildings, no assemblage has been recovered relating to this room.

**Final Remarks**

Although the picture reconstructed is only partial, archaeological evidence led to the individuation of some noteworthy aspects regarding the modalities of food and drink consumption in Protopalatial Phaistos. Moreover, the possibility of linking these kinds of activities to specific physical contexts offers some important information about the social dimension of such activities.

As we have seen, it is likely that consumption activities set inside the palace already took place at the access points, in connection with controlling and managing the entrance of people inside the building. As far as the two northern blocks of the SW quarter are concerned, it has been possible to detect various rooms connected with preparation and conservation of foods and drinks (IL, LV, LXII), or with the storage of tableware (XXVII–XXVIII, LI). It is likely that activities which involved drinking took place in room LIV: however, the consumption of liquids was limited to one or to a restricted number of individuals and was placed within a particular (ceremonial?) setting. Different activities of consumption, connected with meat, took place in room LXII, likely an open-air room, and could involve a larger number of individuals. Nonetheless, this room too had limited access and, also on the basis of the pottery recovered, the activities would not have involved a large number of participants.

In the last MM IIB phase, which preceded the final abandonment of the palace ("phase of the shrines"), evidence comes from room LIX. LIX opens on the lower West court and is relatively large, being endowed with a long bench. Its structural features have led to the hypothesis that a larger number of participants as well as possible involvement of individuals coming from the area outside the palace were likely. However, for this phase, the most

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\textsuperscript{93} Some comparative elements with the crypte hypostyle of Mallia (see Amouretti 1970; van Effenterre 1980, 189–95) have been pointed out. At Mallia in Quartier Mu, another room, endowed with a three-side stuccoed bench, has been identified as a lieu de consommation (Poursat and Knappett 2005, 173), but it does not show peculiar dimensions or finishes as room CVII at Phaistos does.

\textsuperscript{94} Levi 1976, 425; see also Schoep 2004, 261.
striking evidence about food and drink consumption comes from the shrines overlooking the middle West court, which also attest to the carrying out of preparation activities in a ritual setting. It is likely that the new structures took on some of the functions held previously by the destroyed wing of the palace.

In the town area, the only physical built space connected with forms of consumption, with the possible exception of room LXVIII, is room CVII: the bench of the room could host up to 25–30 people sitting,\(^95\) which roughly correspond to the total number of conical cups and of cups recovered in the building. In this case, the focus of consumption is on drinking, as is shown by the vessels recovered. The differences between the drinking vessels could also reflect a hierarchy within the consuming group. An analogous calculation for the benches of room IX and LIX yields other figures: respectively 8 and 15 persons. The calculation is admittedly approximate but does reflect a trend. The activities carried out in the palace were highly restricted and limited to a small number of élite individuals, a conclusion which holds true also for consumption activities: these were likely placed within a formalized frame. However, the case of room LIX in the phase of the shrines hints at the possibility of a more open context, which could also include people arriving from the next court. It is striking to note that a large room, endowed with permanent features connected to special activities that took place there (CVII), was located in the town area. This seems to be the proof that other forms of social aggregation existed, at least partly independent from palatial control, involving a group larger than the one represented in the palace and smaller than the one that could gather in open courts.

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\(^{95}\) The calculation has been made measuring the total linear length of the benches, and dividing it by 0.60 m, which could constitute the unity for a single seat. An analogous calculation has been done by Gesell (1987), in order to define the potential number of people seated in other Phaistos rooms endowed with benches.
Bibliography


The Places and the Role of Consumption in MM II Phaistos


Defining Minoan “Cult Rooms”

Past and Present Approaches to the Archaeology of Cult*

Kathrin Müller

In memory of Veit Stürmer (1957–2013)

Recognizing and identifying “cult rooms” in Minoan Crete has long been a field of research in Bronze Age Archaeology. The exact definition of a room as “cultic” has often only been based on a presumed cultic symbolism of a few objects found within a room, whereas the further scientific foundation of this interpretation has been neglected. Since the time of Sir A. Evans who labelled many of the rooms he found as “cultic” or “religious”, various other investigators have tried to contribute to the topic, drawing mainly on Evans’ and later M.P. Nilsson’s investigations. This article questions these traditional approaches and begins by outlining their principal ideas and inherent basis, i.e. Evans’ concept of Minoan Religion. Some other aspects are then presented in order to improve the traditional ways of identifying “cult rooms”.

To this end, five general criteria will be discussed which are important for identifying a “cult room”, i.e. a room that is involved in the performance of cultic actions: The topographical setting of a room, its architectonic form and accessibility, the mobile archaeological finds, fixed furnishings and decoration, the impression of the whole establishment and also the rooms adjoining the particular “cult room”. These considerations form the methodological and theoretical framework of the present study and are partially based on the investigations by C. Renfrew. Moreover, the employment of methods derived from the Sociology of Space and from Ritual Studies is suggested in order to enhance the interpretative view on the archaeological material. Finally, by means of two characteristic examples from the Minoan Palatial period, a careful examination of a complex of so-called cultic rooms is carried out, drawing exclusively on the archaeological remains. The aim of the paper is to re-interpret from a critical perspective a room as “cultic” based on the archaeological material as a whole and thus create a new basis for the identification of cultic actions and consequently also of “cult rooms” applicable for future research.

History of Research: The Identification of Minoan “Cult Rooms”

This paper draws attention to a long-discussed topic of research in Minoan Archaeology: The recognition and identification of “cult rooms” – in the context of this paper meaning built spaces which are involved in the performance of cultic actions – in Minoan Crete in the Protopalatial and Neopalatial period.

The basis for all investigations in the field of Minoan cult is the work of Sir Arthur Evans, the famous British archaeologist, who had been excavating the palace at Knossos since 1900. In 1901, his treatise on “Mycenaean Tree and Pillar Cult and its Mediterranean Relations” was published, while in 1921 the first volume of his work on “The Palace of Minos at Knossos” appeared. Both works broadly discuss aspects of Minoan cult. Evans’ theory on Minoan religion has served as the foundation for every treatise on Minoan “cult rooms” and rites until the present. His main thesis is that the centre of Minoan religion consists of the veneration of an oriental-type mother goddess. This mother goddess, according to Evans, is venerated together with her equally divine, but mortal youthful companion.1

Evans’ theories probably are mainly based on the ideas of Sir James Frazer,2 which were very popular in Evans’ day: Frazer was a social anthropologist influential in folkloristic religious research on antiquity and orient. In his most famous work “The Golden Bough”, published in 1890, he states that “old religions” are generally founded on a fertility cult of a goddess and the veneration of her companion. This mother goddess, according to Evans, is venerated together with her equally divine, but mortal youthful companion. Evans probably adopted these ideas.

* I would like to dedicate this paper to the memory of my late doctoral advisor, Dr Veit Stürmer, who encouraged me to conduct a thesis on Minoan “cult rooms” and to whom I owe a lot. This paper is a preliminary version of parts of this doctoral thesis, with a special focus on the history of research concerning the development of Minoan cultic symbolism, an aspect deriving from my work on “cult rooms”. For the correction of my English I would like to thank Anna Hodgkinson.

1 See, e.g., Evans 1921, 160–61; 1928, 1:277. For an oriental-type of goddess, see Evans 1921, 51–2.

2 The spirit of the age also played an important role at the end of the 19th century: Evans probably employed universal assumptions of his time. It is difficult to decide whether Frazer influenced him either directly or indirectly. On this problem cf. Pearfield 2000, 140–41: He reconstructs a “spirit of the age” rather than a direct influence, but he possibly missed a note in Evans 1921, 3 n. 3: Here Evans...
Defining Minoan “Cult Rooms”

The goddess and her male companion, in other words the deity itself, can – according to Evans’ belief – appear in different shapes: On the one hand, it could appear in the shape of an animal, such as a bird or a snake, but, on the other hand, the deity could be venerated in an aniconic shape, such as a double axe, a pillar or column (i.e. a baetyl) or as inherent in a tree. Evans mainly based his cultic symbolism of Minoan culture on these assumptions. There are various artifacts from the Minoan Palatial period which have largely contributed to the establishment of this assumed cultic symbolism: Among these so-called cultic symbols is the well-known terracotta group depicting birds sitting on columns (and thus perhaps turning them into holy columns?), the so-called Snake Goddess from Knossos – a woman holding snakes in her hands – and double axes as real objects, e.g. the miniature gold double axes from the cave of Arkalohori. Furthermore there are two famous gold signet rings, one from Knossos showing a scene of supposed pillar worship and another one from Archanes with a possible scene of tree cult. These interpretations are of course rather speculative and mainly based on Evans’ previous assumptions.

Another symbol appearing in a strong relationship with depictions of double axes, birds, pillars or columns and trees, are horns: These can be found, for example, on a miniature fresco from Knossos, depicting columns with small double axes set into the capital, and horns situated on a small balustrade in between the columns. Horns are also shown on bucrania and in combination with double axes, as, for instance, on a vase from Pseira and on a gem from Knossos. Moreover a bronze plaque from the cave of Psycro again depicts horns as stand-alone objects in combination with branches between them and also a bird, as well as a person standing near them, possibly dancing. In Minoan research these horns are usually labelled “horns of consecration”.

Otherwise, horns appear mainly on buildings and square objects: They can be found on the gold sheets from the shaft graves at Mycenae, which are dated parallel to the Minoan Palatial period (LH I/IIA, Neopalatial period). Even Heinrich Schliemann identified the depicted buildings as “small temples” because of the horns and birds located on top of them; and in later Minoan research these buildings would belong to a group of typical depictions called “tripartite shrines”. A very similar depiction is found on the so-called Peak Sanctuary Rhyton of Zakros: Here too, a tripartite building is indicated, possibly a sanctuary owing to the same horns and birds sitting above it. Furthermore, a depiction of horns on a square object is preserved on a fragment of a stone rhyton from Knossos: According to researchers, the square object represents an altar, mainly because of the horns on top of it. Furthermore, the horns also appear as real objects, such as the plaster double horns from Petsophas and the clay horns from the so-called palace of Archanes. All in all, the interpretation of these horns as holy symbols can be traced back to Evans. In contrast to this very widely accepted view, it should generally be questioned whether the appearance of horns is really sufficient to assign a cultic function to an object or building.

Altogether, it is very important to note that all symbols presented have led to the identification of cultic objects and thereby also “cult rooms” since the time of Evans. One of the most essential foundations for the identification of cult symbols and thereby cultic objects is illustrated by the well-known Hagia Triada Sarcophagus: This sar-
A sarcophagus was discovered and published in 1903. Unfortunately it is dated as recently as LM IIIA, but displays a cultic action presumably performed in the course of a funerary rite. It is presented here – in spite of its very late date – because it perfectly combines all desired cultic symbols mentioned above: On one side of the sarcophagus, in the context of a kind of procession with a bull as sacrificial animal (the blood is dropping into a receptacle underneath), a woman is performing an action in front of a pole with a double axe and a bird above it. To the right of this a building surmounted by horns and a tree is depicted. A presentation scene with offerings and a libation scene can be seen on the other side of the sarcophagus; here the liquid is poured into a receptacle set in between a pair of sockets for tree-like poles, again surmounted by double axes and birds. These depictions are often used as proof for the correctness of Minoan cultic symbolism; however this relic is rather late and furthermore certainly belongs to the realm of funerary rites. Recently Brendan Burke has pointed out that on the sarcophagus an archaic Minoan symbolism was adopted and transformed in order to communicate a Mycenaean ideology. Thus the sarcophagus’ usefulness in the interpretation and assignation of original Minoan cultic symbols may indeed be questionable.

The most important successor of Evans regarding religious research on Minoan and Mycenaean culture was the Swedish scholar Martin Persson Nilsson: His work on “The Minoan-Mycenaean Religion and its Survival in Greek Religion” was published in 1927, with a revised edition in 1950, and pursued a more “archaeological” way of interpreting findings by questioning some of the so-called cult symbols and cultic objects as well as the connected rooms more critically. Simultaneously, he also adopted a substantial number of ideas from Evans without really challenging them.

More recent research has mainly focussed on two aspects: On the one hand, Paul Faure (e.g. 1964 and 1967), Bogdan Rutkowski (1972 and 1986) and Geraldine Gesell (1985) at first pursued a primarily archaeological and architectonic approach towards “cult rooms”, searching mainly for sanctuaries and shrines within the archaeological material. On the other hand, a new tendency of research, and thereby the second important area of studies on Minoan “cult rooms”, was recently pursued by Santo Privitera (2008), Robert James Cromarty (2008) and Mara Zatti (2009), following some initial research approaches of Peter Warren (1988) and Nanno Marinatos (1986): They treated the rituals conducted in rooms more carefully and more critically; moreover they did not search for the particular “cult room”.

Nonetheless – with the exception of Cromarty who drew above all on the remains of animal sacrifice – all the scholars mentioned also adopted many of Evans’ and Nilsson’s assumptions, especially regarding the evidence of the performance of a cultic action in a corresponding room, which they still mainly based on a presumed cultic symbolism of the finds, deriving mainly from employing uncritically the iconographic evidence and taken over from the preceding earlier researchers. This supposed cultic symbolism already presented above cannot be proven due to the lack of written sources for the Minoan period and therefore poses a considerable problem: These presumed cult symbols were adopted too carelessly and over time have been simply fixed as facts in the scientific discourse.

Furthermore, by using analogies of great chronological distance – see, for example, the Hagia Triada Sarcophagus – researchers have tried to prove the cultic significance of certain symbols, which has been a very problematic strategy. In contrast to this traditional approach, new analyses should first adhere to a chronological proximity of the findings to prove such assumptions. In more recent research, this aspect has already been noticed by Camilla Briault, who particularly investigated processes of ritual transmission by charting the distribution of cult symbols, ritual spaces and cult objects: In her investigation, Briault, amongst other things, reveals temporal differences in the employment of symbols, which can be crucial for the detection of a symbol’s significance.

Another new approach to the problem of interpreting Minoan symbols is pursued by Matthew Haysom, who examined the changing significance of the double axe from the Neopalatial period to the later periods, arguing that

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19 Excavations in 1997 established a date for the sarcophagus in the LM III A:2 period, see Burke 2005, 403 with n. 2, for illustrations, see 404, figs. 1–2. For a description of the sarcophagus in general, see Long 1974, cf. also her chronological discussion on the LM III A-date of the sarcophagus on pp. 21–3.
20 Cf. Burke 2005, 404, fig. 2 for a depiction.
21 See the illustration in Burke 2005, 404, fig. 1.
22 Burke 2005, 418.
23 For an example, see the review on Privitera’s book in Müller and Stürmer 2013, esp. 448–49.
it first was primarily a symbol of a social group and gained its exclusive religious significance only rather late.\textsuperscript{25} His research demonstrates the general problems inherent in an ascription of meanings to symbols and stresses the necessity of a contextually differentiating approach to interpreting symbols.

Altogether there is a strong need to create more appropriate methods for identifying a room as a “cult room” in general – other than those solely based on a presumed cultic symbolism of the objects found within a room.

\section*{A New Approach to the Identification of Minoan “Cult Rooms”}

A milestone in cultic research is the work of Colin Renfrew owing to his methodological identification of rituals and thus also “cult rooms” in the archaeological material. His study “The Archaeology of Cult: The Sanctuary at Phylakopi” was published in 1985, and using the example of a Mycenaean building context (LH IIIA, Melos) he presented diverse archaeological correlates which help identify a place of ritual, and here especially religious ritual, in the material record. These correlates are based on four main features of ritual and thus also “cult rooms”,\textsuperscript{26} which are likewise applicable to Minoan cult:

1. The setting of a room, its layout and furnishings as well as the use of special devices should raise a heightened awareness of the celebrant and thus function as “attention focussing”.
2. The “special aspects of the liminal zone” must be recognisable in the archaeological record, namely in the shaping of the room and in its impression on the celebrants, to name an example. Moreover, the topographic position of a place can also be relevant in this context.
3. The “presence of the transcendent and its symbolic focus” should be discernible, for instance through the use of special images or a certain symbolism, which can possibly also be seen in the archaeological finds and in the furnishings of a room.
4. Finally, the results of the celebrants’ “participation and offering” during the ritual must be recognisable in the archaeological material, such as in different findings and furnishings of a certain area.

On the basis of a critical treatment of these correlates set up by Renfrew and by recommending the use of the more general term “ritual”, including both religious and secular aspects of ritual, some modified criteria are proposed here which draw on general archaeologically traceable characteristics of rooms and could be helpful in identifying a “cult room”, i.e. a room that is involved in the performance of cultic actions:

1. The \textit{topographical setting} of a room: e.g. a place can be exposed or hidden; moreover, an analysis of the room’s natural environment can often also be promising.
2. Analysis of the room’s \textit{architectonic form and accessibility}, concerning for example direct or dog-legged access to a room, and the room size.
3. The \textit{mobile archaeological finds}: That means whether \textit{in situ} objects with identifiable ceremonial functions or votive offerings, ritual depositions, offering facilities and musical equipment appear in a room and therefore could perhaps hint at the performance of cultic actions. In addition, the question whether the finds comprise a certain symbolism must also be carefully investigated, always keeping in mind the problems already mentioned in connection with this issue: Interpreting symbols depends on context, but it is possible to detect the repeated appearance of certain symbols, hinting at a cultic significance of these finds. The occurrence of an accumulation of certain objects and of similar find patterns, in particular, may point to cult objects and thus may indicate the performance of cultic actions in a room.
4. Considering the \textit{fixed furnishings and decoration} of a room and the \textit{impression of the whole establishment}, such as possible darkness or lightness of a room, its presumed height and also again its size: These aspects may permit further conclusions, for instance, concerning the amount of participants in a cultic rite. Furthermore, the presence of cultic installations in a room, e.g. built channels for libations, is also important for identifying the performance of cultic actions therein. Again a certain kind of symbolism may be utilized here, possibly hinting at a ritual use of the room.

\textsuperscript{25} Haysom 2010, 50–2.
\textsuperscript{26} Cf. Renfrew 1985, 18–20. He based these features on observations adopted from research results of various other disciplines, e.g. from Religious Studies, Social Anthropology/Ethnology and Sociology, see Renfrew 1985, esp. 11–7.
5. Analysis of the rooms adjoining the particular “cult room”: In this way, the room’s function within the building may become discernible. Other room structures, such as a court or courtyard with further cult equipment may appear which could also hint at a cultic use of a complex of rooms. It may also be possible to figure out whether in the Minoan Palatial period a so-called temenos area existed around specific “cult rooms” in certain cases.

These considerations form the methodological and theoretical framework of the present work and aim at providing means for a differentiated new approach to identifying Palace-period Minoan “cult rooms” by refocusing on the complete archaeological material instead of relying on a presumed cultic symbolism of certain objects found in a room.

In addition to the abovementioned criteria, some additional methods derived from other scientific areas should briefly be mentioned, which could also enhance research on Minoan “cult rooms”: It could, for example, be very enlightening to examine certain well-preserved rooms or buildings with the help of a spatial analysis software, i.e. to conduct a space syntax analysis of Minoan “cult rooms”. In this way it might, for example, be possible to discern potential axes of visibility in a building and thus figure out the visual embedding of rooms into a building in order to gain additional clues of a room’s spatial use.27

Another aspect derives from research connected to the so-called Spatial Turn in Cultural and Social Sciences: A very famous work is Martina Löw’s “Raumsoziologie (Sociology of Space)” published in 2001, which abandons the common view of treating space as a container for action by establishing a concept of relational space, in which spaces are the relational arrangement of objects and living beings in a place. According to Löw, spaces are the result of both the positioning of objects and living beings, which she calls “spacing”, and of the mental process of synthesis, combining the whole arrangement into a spatial unit through perception (compare the graphic represen-

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27 For this method already applied to a range of Neopalatial rooms and buildings, among these also possible “cult rooms”, compare e.g. Leesson (2009, esp. 16–8), where he comments on the method of visibility analysis and its limitations.
Defining Minoan “Cult Rooms”

28 Following one part of this theory, in addition to the process of synthesis at the same time space is thus constituted through the process of “spacing”, which means that, for instance, walls are built or objects are positioned. In this way, amongst other things, built rooms as a part of space are also created during this “spacing” process as a social action. In addition, they can also be the place of this social action, the place where other objects and living beings are arranged. Furthermore, the room may influence or structure the creation of space, as space as a whole and built rooms with their furnishings in particular can also structure action. These aspects of space and thus also of built rooms can likewise be relevant for the analysis of rooms and their functioning as places for the performance of cultic actions. If “cult rooms” are created through “spacing” processes, which specific finds or installations in a room or architectural features of a room may hint at this process and are thus necessary for the creation of this “cult room”? Moreover, a particular kind of architecture of a room may influence the creation of a certain cultic space and by doing this it may influence also the cultic actions therein. In this respect, especially the furnishings and installations in a room play an important role as they may structure (cultic) actions in it. Moreover, the perception of space and thus also of a built room is important in establishing its functioning: By investigating how a certain atmosphere or impression of the room is produced and thus how a room may have been perceived, a hint of the room’s real significance can perhaps be detected.

Besides, a broader view on research results from ethnographic studies on ritual, partly already used by Renfrew to set up some of his criteria, can likewise give a new input into the investigation of cultic action, also applicable to Minoan times: compare e.g. the theoretical approach in “Ritual Theory, Ritual Practice” by Catherine Bell, where it is stated that a ritualized action, i.e. a ritual, is the performance of a special, privileged social activity. During the process of ritualization a structured symbolic environment is created, which is characterized by the presence of special spatial features and particular objects. Some of the most notable attributes of ritual and ritualization are invariance, rule-governance and formalization. Due to these peculiarities ritual is thus distinguishable from other activities, an aspect that also becomes apparent in the archaeological record: Ritual action through its structured sequence, repetitive and symbolic elements always produces a type of particular pattern detectable in the archaeological material. Keeping these additional considerations in mind, a new understanding of Minoan “cult rooms” can be developed.

Examples of Minoan “Cult Rooms”

In order to give an example of the identification of the performance of cultic actions and thus also “cult rooms” based exclusively on the archaeological material, finally two examples of Minoan so-called cult rooms dating to the Palatial period will be presented.

The Peak Sanctuary on Petsophas

The first example comprises the Minoan peak sanctuary on Petsophas. This well attested place of cultic activity was chosen to gain an established starting point for the investigation of further, more uncertain examples of “cult rooms”.

28 See Löw 2001, 158–60, 271. In her study Löw, introduces the term “social goods” which she applies to all material goods, i.e. objects, including their symbolic value, see Löw 2001, 153–54. The graphic representation is drawn by Sergej Stoetzer on the basis of Löw’s theory.
29 See Löw 2001, 158.
30 See Löw 2001, esp. 169–70, 210; cf. also Löw et al. 2007, 63–6. On the structuring aspect of space and the close relationship between architecture and action in general, see also Maran 2006.
31 Compare Löw 2001, 169–70; for this aspect, see also especially Rapoport 1982, esp. 88–101.
32 See Löw 2001, 205, 209, 229; also Löw et al. 2007, 65.
34 Bell 1992.
35 See Bell 2007, esp. 282–85, where she argues for the use of the word “ritualization” and avoidance of a definition of the term “ritual”.
36 See the precise summary in Verhoeven 2002, 21, 23 and also in Kyriakidis 2007, 10.
37 Cf. Kyriakidis 2007, 20. For a critical illumination of symbolism employed in religious ritual and the limits of its archaeological recognition, see also Wright 1995, 342–44.
Protopalatial Phase

1. **Topographical setting:** The peak sanctuary is situated in eastern Crete near the Minoan town of Palaikastro. It is located on the highest summit, at a height of approximately 250 m.

2. **Architectonic form and accessibility:** The archaeological record for the initial phase of occupation, during the Protopalatial period (starting in MM I), consisted of a simple, high wall A–B–C–D surrounding the place on the hill (fig. 2). The area was possibly accessible from the east via some rudimentary steps found to the north of the complex near E. The enclosing wall can probably be interpreted as a type of temenos wall, surrounding an area of at least 170 m².

3. **Mobile archaeological finds:** Inside the enclosure a very thick layer of ashes containing clay figurines and votive limbs was found, i.e. separate parts of the body with holes, probably in order for them to be hung. In the same layer animal figurines were discovered, for example beetles, as well as miniature vessels and clay balls or pebbles. The great amount of the votive remains attests to the performance of a repeated symbolic action, i.e. a regular ritual, at this place.

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Myres (1902–1903, 356) notes that during the time of excavation the wall at angle C was preserved up to a height of approximately 2.50 m. In Rutkowski’s times wall C–D was preserved up to a height of 1.95 m, compare Rutkowski 1991, 17. See Myres 1902–1903, 360–61 for a rough phasing of the structures on the hill; cf. also Rutkowski 1991, 17 for the date of the wall and constructional details.

Rutkowski 1991, 19: He cannot exclude the possibility that the steps may also have been an addition of the second phase of the sanctuary.

Surface measure according to plan in Rutkowski 1991, 18, fig. 1 (cf. my fig. 2). For the idea of the “temenos” in general, see e.g. Rutkowski 1986, 75–6 and in reference to Petsophas Rutkowski 1972, 159. Possibly the presence of this temenos wall could have also turned the place on the hill into a kind of sacred enclosure: According to Lebessi and Muhly (1990, 332–33) the term “sacred enclosure” can only be used if the wall encompasses a specific ritual area and not the whole area of a sanctuary including areas used for various purposes. However, this may also apply to the initial phase on Petsophas. Therefore the term sacred enclosure could potentially be used to describe the situation on Protopalatial Petsophas as well.

Cf. the figurines, votive limbs, miniature vessels and clay balls illustrated in Rutkowski 1991; see also Myres 1902–1903, pls. 8–13.
4. **Fixed furnishings and decoration, impression of the whole establishment:** As this room was open-air and non-built, no assumption about the fixed furnishings such as cultic installations and the impression of the room can be made – except for the probable inspiring effect of the surrounding natural environment with a magnificent view of the coast.

5. **Rooms adjoining:** No annexing built rooms are recorded; only the existence of an open-air, enclosed sacred area, a kind of temenos area, can be postulated for this first phase.

**Conclusions:** All in all, the existence of a thick votive layer inside a walled enclosure, a kind of temenos wall, can be stated for this period and thus the repeated performance of open-air cultic actions at this place is verified. Accordingly, Bogdan Rutkowski, who investigated the place in more detail, proposes a reconstruction without any buildings for this first phase, just with the enclosure wall and one or two supposed altars. These have left no traces in the archaeological record except for ashes, which could indeed hint at least at the presence of one fire altar. This must, however, remain speculative and therefore is not mentioned here as a kind of fixed cultic installation.

### Neopalatial Phase

A second phase, during the Neopalatial period (MM III/LM I), saw the erection of a building above the already discussed votive layer:

1. **Topographical setting:** See first phase.

2. **Architectonic form and accessibility:** The building consisted of at least two rather small rectangular rooms (cf. fig. 2), room no. 1, and room no. 2, which is hardly preserved. Potentially there were two more rooms, one in the eastern part of the building (no. 3) and one in the northern part (no. 4). The area with the building was probably accessible from the eastern side via some steps, as already mentioned for the first phase. An entrance to the building itself is not preserved, but it may have been situated on the north-eastern side.

3. **Mobile archaeological finds:** Unfortunately, except for one rough stone lamp, no other finds came from the building itself. The presence of a crudely manufactured lamp points to the additional need for light in the building, in addition to sunlight: This fact was certainly due to the great height of the massive wall C–D, comprising the main outer wall of the building and probably preventing sunlight from entering the building, at least from the south. If windows had existed on this side, these must have been very high above on the wall and thus could not have permitted much light to enter the room.

4. **Fixed furnishings and decoration, impression of the whole establishment:** Room no. 1 had a bench running along the wall and possessed a rather remarkable furnishing: According to Myres the bench was approx. 25 cm high, and plastered in the same way as parts of the walls and the south-western part of the floor of the room, while a pavement with schist slabs was found in the north-western part. The room occupied a quite moderate area of approx. 27 m². These features attest altogether to a quite impressive furnishing of room no. 1, being perhaps the main room of the building. Whether or not the bench was used to arrange some sacrificial symbols or (cultic) objects on it must remain open due to no such finds. Since probably not much sunlight could enter room no. 1, it had to be illuminated by artificial light, as shown by the aforementioned lamp found in the building. This might have caused a kind of “mysterious” dark atmosphere inside room no. 1, which may have resulted in a special enigmatic experience for the visitor of the room. Actions of worship might have been a result of this arrangement, which was perhaps deliberately staged. Nevertheless these features alone are not sufficient to assign a clear cultic function to this room of the building. Since room no. 2 is hardly preserved, nothing can be said about its fixed furnishings, decoration and impression.

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42 See the depiction in Rutkowski 1991, 18, fig. 2.
43 Rutkowski (1991, 19) assumes a stone altar and a fire altar similar to the situation at Juktas, where a stone altar and also the layer of a fire altar have been found, see Karetsou 1981, 138, 146. Furthermore, no bones have been recorded from the ash layer at Petsophas, whereas at Juktas also bones were found; cf. Cromarty 2008, 34–5, 37–8.
44 Cf. the rough room size given in Rutkowski (1986, 80), apparently only meant to apply to room no. 1: 7.20 m x 3.70 m. For constructional and chronological details, see Rutkowski 1991, 20: In this phase also the walls D–F and D–E were built. Room no. 5 seems to have been an open-air area.
46 According to Myres (1902–1903, 360) this lamp came from room no. 1, dating to the same phase as the building.
47 Myres 1902–1903, 359.
48 The small height of the bench is not singular, see e.g. the benches of room VIII of the palace at Phaistos in Gesell (1985, 120) and the bench of room XVIII 1 of the palace at Malia (Gesell 1985, 106), and thus might not contradict such a use.
5. **Rooms adjoining:** No more built structures apart from the building are reported, but in the further surroundings of the building several fragments of so-called stone libation tables with inscriptions in Linear A have come to light.\(^{49}\) Equally, the aforementioned small plaster double horns originate from here.\(^{50}\) Whether or not these indicated the sanctity of a certain area at Petsophas or were even set up inside the building itself must remain open to debate, but their appearance at many other sites probably used for cultic rites might hint at their cultic significance.\(^{51}\) However, these scattered objects, especially the stone libation tables which may indeed have had a cultic function, might indicate the performance of cultic rites in the surrounding area at times, but are not sufficient alone to postulate a permanent cultic use of this area, and even less of the building itself.

**Conclusions:** All in all, it is therefore safe to say only that the building was erected above a former cult area, a so-called cult room. The occurrence of scattered finds – which may have had a cultic significance – in the area around the building might attest to the occasional performance of cultic actions in the area, but not inside the building itself: Indeed, it is still possible to assume an “ancillary” cultic use for the two-roomed structure as well; at least it could have functioned as a storeroom for cult equipment. The presence of a bench and remarkable furnishing in room no. 1 as well as a possible “mysterious” impression of the room may hint at its being a significant room, but its cultic function cannot be attested by this fact alone. In a nutshell, the cultic function of the building and therefore the identification of a built “cult room” in the second, later phase remains uncertain. In spite of this uncertainty, Rutkowski ventures to propose a reconstruction of the building during the second phase of the sanctuary.\(^{52}\) He reconstructs the building according to the iconographic evidence from the well-known Grandstand Fresco from Knossos and the already mentioned Peak Sanctuary Rhyton from Zakros depicting so-called tripartite shrines, although this suggestion is very tentative for the building on Petsophas because of its very doubtful cultic function.\(^{53}\) Therefore his opinion should not be followed here, only the presence of an enclosed open-air cult area can be ascertained at Petsophas during the Palatial period.

**A Protopalatial Complex of Rooms in the Palace at Malia**

The second example is constituted by a complex of rooms within the palace at Malia.

1. **Topographical setting:** The palace of Malia is situated in a small valley in the north-eastern part of Central Crete; further to the south the valley is framed by the foothills of mountains.

2. **Architectonic form and accessibility:** The complex of rooms to be studied is located in the west wing of the palace beneath the remains of the New Palace: Here, three rooms, α, β and γ belonging to the Protopalatial period

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\(^{49}\) These came mainly from the area to the east and south of the building, cf. Davaras 1972, 102, with illustrations. They date to the MM III–LM I period, see Rutkowski 1991, 16. Cf. also Davaras 1972, 102–3, and Warren 1969, 62–7: The material (serpentine) was mainly used from MM III onwards. At least eight different specimens could be distinguished belonging to the area of Petsophas, see Warren 1969, 65–7, and Davaras 1972; 1981. In addition, more figures were found in the rock crevices of the area, cf. Rutkowski 1991, 17, and Davaras 1981, 1, but these obviously only date to the first phase of occupation on the hill, MM I and MM II; see Rutkowski 1991, 16 with n. 27; 29, 119–20. Moreover, fragments of vessels were found inside the cultic area: Kyriakidis (2005, 136, table 10) mentions clay cooking pots, but does not provide any reference. Rutkowski (1991, 113 n. 10) refers to an “immense number of fragmentary vases” on the surface of the area, but the precise character of these vases and their date remains obscure. Furthermore Kyriakidis (2005, 132, table 8) mentions “plates, fine, clay”, but by checking Rutkowski (1991, 115) and Myres (1902–1903, 378–80), these “plates” presumably turn out to be very small discs but not plates with a reasonable function “for feasting” as suggested by Kyriakidis. The performance of activities related to cult other than the use of libation tables on Neopalatial Petsophas must therefore remain vague.

\(^{50}\) They originate from the south-western area of the building and presumably date to MM III–LM I as well: See Davaras 1980, 89, 90–1 with n. 15, who dates them – due to their findspot and their supposed original placement inside the building – to the time of the building’s existence and preferably to the end of this period.

\(^{51}\) Compare Davaras 1980, 91 with n. 15; 92. As these plaster double horns at Petsophas were quite small, they might have also been a kind of votive offering themselves.

\(^{52}\) See the depiction in Rutkowski 1991, 19, on the top of the page (fig. 3).

\(^{53}\) Cf. the depiction on the Grandstand Fresco, e.g. in Nörling 1995, pl. 8.3. Myres (1902–1903, 360) observed a relative continuity of the two successive phases at Petsophas: The building itself must have been almost directly erected above the former cult area, for no layer of vegetation was found between the two strata. This could indeed hint at a continuity of function as well. Nevertheless, Myres interprets the building as a secular one, while many other researchers assigned a cultic function to it: See Rutkowski 1991, 16, 20; equally Nilsson 1950, 70. It is perhaps safer to assign a function as a kind of backdrop for cultic actions to the building at Petsophas, subsequently, also an outer appearance of its façade similar to the iconographic evidence is at least possible. I thank Professor Peter Warren for this comment (pers. comm. 2011); for a similar view on the function of the tripartite façades, cf. Majewski 1960, esp. 59–60.
Defining Minoan "Cult Rooms"

(MM II) were found (fig. 3).54 These rooms were accessible via the so-called West Court. The first room, the sizeable room α, serves as a kind of vestibule for the other rooms.55 The central room β was very large:56 In the centre of this room the remains of two parts of walls that could have been pillars were found.57 The third adjoining, equally quite spacious room γ was connected to β only by means of a window-like niche.58

3. Mobile archaeological finds: A very interesting discovery was made inside room β: On the northern platform next to the pillar an in situ ritual deposition of about 20 Chamaizi juglets was found (fig. 4);59 which were possibly used during the performance of some cultic rite including libations. Thus the performance of a repeated symbolic, i.e. cultic action may be attested in this room. Furthermore, two bronze swords, one of these being the one with the famous acrobat decoration of gold on the pommel, came to light.60 Perhaps these swords served as a kind of sacrificial tool?61 Such a theory could be supported by a particular find from the adjacent room γ, which revealed the remains of a bovid horn,62 a discovery that could indeed hint at the performance of sacrificial rites in room β. Other finds from room β include the remains of stone vases, a fragment of an ivory relief, perhaps belonging to a male figurine, and a fragment of a lamp found in front of the northern, window-like niche.63 This fragment of a lamp may hint at the necessity of illuminating the room also by artificial light; furthermore, the presence of one possible figurine may only give an additional hint at a cultic function of the establishment, since taken on its own this would not be sufficient to postulate the performance of cultic actions in this room.

54 They are situated beneath quarters III and IV, with room α lying in the area beneath room III 2, room β lying mainly beneath room III 1 and a part of III 2 and III 7a, and room γ lying principally beneath rooms III 7a and IV 1, see Pelon 1992, 72, plan 6. As already mentioned, the complex of rooms dates to the MM II period, cf. Pelon 1982, 182 with n. 47; 1983, 701.
55 Pelon 1983, 683. The room measures approx. 38 m² for its preserved parts according to the plan in Pelon 1983, 685, fig. 9 (cf. my fig. 3); see also Pelon 1980, 54 with further references; 1982, 176, 178.
56 It comprises an area of approx. 65 m², cf. Pelon 1983, 693.
57 See Pelon 1982, 178: Probably the two walls would have reached up to the ceiling. However, according to Pelon (1983, 693) they could have been the remains of walls rather than pillars.
58 The room measures approx. 52 m², in its middle a double wooden post was inserted to support the ceiling, see Pelon (1983, 693) and Pelon 1992, 36. For the window-like niche, cf. Pelon 1983, 686.
59 Chapouthier 1946, 88–9; Pelon 1982, 168. For a photo of the juglets, see Pelon 1982, 169, fig. 7. A religious significance of the Chamaizi juglets connected with a supposed pillar cult was already presumed by Pelon (1982, 185). See also the reference to libations in Pelon 1983, 695.
60 Chapouthier 1938, esp. 15–6; Pelon 1982, 166. For a photo showing a reconstruction of the deposition of the swords as originally found and for a drawing of the gold decoration on the pommel, see Pelon 1992, 35, fig. 13 and 37, fig. 16.
61 As implied by Pelon 1983, 696.
62 Pelon 1983, 691, fig. 15; 692.
63 For the remains of stone vases, see Pelon 1982, 166, 172; Chapouthier 1938, 13; for the fragment of the ivory relief compare Chapouthier and Gallet de Santerre 1947–1948, 406; Pelon 1982, 172–73 with fig. 13–14; 180. This fragment could actually have also belonged to the ivory pommel of the second bronze sword found in the room. However, it is not clear from the drawings whether the fragment’s parts that look like legs are broken or intact and worked out; for the fragment of a lamp, see Pelon 1983, 686.
4. **Fixed furnishings and decoration, impression of the whole establishment**: Besides featuring a coloured decoration of its floor and walls, the main room β comprises various low stone platforms running along the walls and flanking both pillars. These platforms create a tripartite room structure, a fact that could possibly reflect a certain intention for the room’s layout rather than being the result of mere coincidence. This tripartite structure of the room may be understood as the “creation” of a cultic space through this layout, adhering to the well-known depictions. Through this particular form the room influences and structures the possible cultic actions performed therein: These could have only taken place inside the three quite narrow aisles or in front of these, at the two pillars. Inside the narrow aisles only a few people could take part in an action, and this action must have been procession-like as only two persons could have walked or stood side by side. The largest space for actions was available in the northern aisle, in front of the window-like niche, perhaps assigning a special function to it. In front of the aisles more space was available, making thus the gathering of a somewhat larger group of people in front of the pillars possible. Besides, alongside the platforms different channels are carved into the floor of the room and also onto the platforms themselves. Furthermore, these platforms are set up slightly slanted so as to ease the flow of liquids into the collecting vessels inserted into the floor. This furnishing strongly hints at the regular performance of libations in this room which was especially designed and equipped for these actions.

One particular channel was found on the platform at the eastern wall of the room: This is a longer channel with a large cavity and various smaller cavities next to it (cf. fig. 3). The excavator, Olivier Pelon, suggests that the small cavities served as insertion holes for table legs, and that this table perhaps had the function of holding a sacrificial animal, e.g. comparable to the depiction on the Hagia Triada Sarcophagus. According to Pelon, the blood of the animal would then have run into the channel with the larger cavity, beneath the table. However, it should be noted that this assumption is highly hypothetical and unfortunately cannot be proven solely by the existence of the cavities on the platform, which could have also served another kind of construction, such as a shelf or the like – a second possibility also mentioned by Pelon. Alternatively, the holes might have served for the insertion of special cultic objects, e.g. figurines – a possible fragment of one has already been mentioned as coming from this room –, equally certain types of stone libation tables might fit into the holes, as well as some types of ceramic vessels, for example the so-called fruit stands.

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64 The remains of white, reddish brown and perhaps also ochre-yellow plaster were found, indicating a decoration of the floor and the walls, cf. Pelon 1983, 693. The same decoration was also applied to room γ.
65 Pelon 1983, 683. The low platforms were plastered, see Pelon 1982, 178.
66 Pelon 1983, 695. He compares the tripartite structure to the depictions on the gold sheets from Mycenae, the Grandstand Fresco and the three-roomed building at Anemospilia, where a stone basin at the entrance of the central room was perhaps also used for the performance of libations, see Sakellarakis and Sapouna-Sakellaraki 1997, 1:279. For the measurements of the three oblong parts, see Pelon 1983, 687.
67 See supra n. 66.
68 Compare equally Pelon 1983, 687.
70 Pelon 1983, 687, 689. The small cavities have a depth of approx. 4–7 cm, see Pelon (1983, 687) for the measurements and a photo of the cavities on 682, fig. 7. In addition, contrary to Pelon’s opinion, it should be noted that the liquids – according to the slightly greater depth of the channel in the direction of the wall, also noted by Pelon (1983, 687 n. 24) – even if they were first collected in the larger cavity, would then have directly run towards the wall. Despite this fact, Pelon (1983, 687 with n. 24; 689) adheres to the assumption that the liquids must have run through the channel into the larger cavity.
71 For the libation tables compare Warren 1969, 62–8, especially those dating to the Protopalatial period. Two of the “fruit stands” found in the annexing room ε mentioned below in more detail might have also fitted into at least one of the circular cavities, see no. 2 and no. 3 in Pelon and Stürmer 1989, 103 with fig. 3–6.
Concerning the impression of this complex of rooms, the central large room β must have had a very imposing effect on the visitor, in addition, its access was provided by a quite impressive vestibule with two columns, room α, emphasizing the function of room β as the main room of the complex. As far as the excavations could reveal, it was connected to the equally finely decorated room γ only by a window. Therefore, the communication between the two rooms was probably only visual. Furthermore, room β with its one doorway opening to the north-west and the small window was probably quite dark, as is also indicated by the aforementioned lamp found in front of the niche. If this lamp stood originally in the area of the niche, the room could be illuminated artificially from the back, creating a sort of “enigmatic” atmosphere for the visitor. When entering the room, the visitor walked directly towards the northern pillar where the deposition of juglets was found. This area could also be seen from the outside, being perhaps the focus of initial cultic actions, whereas the aisle in the middle of the room was only partially visible from the entrance while the larger cavity with the channel described above was completely hidden from view by the northern pillar, potentially being created for more secluded cultic actions. In addition, the effects of the incoming evening sunlight at certain times of the year might have also enhanced the impression of the room and contributed to a special staging of this space and its furnishings.

5. **Rooms adjoining:** Of the Protopalatial rooms surrounding rooms α to γ relatively little is known: It is possible that there was one more room to the east adjoining room γ. To the north of β and γ, a kind of corridor, room ε, was situated; furthermore, a portico lay to the north of γ. Whether these surrounding rooms originally belonged directly to the complex of rooms α to γ must remain open, since excavations were not conducted further and no connecting doors or the like have been found so far. However, several ceramic vessels of a probable cultic use, so-called fruit stands, came to light in the room above corridor ε, thus perhaps supporting the presence of a cultic area here.

**Conclusions:** All in all, a cultic use of the rooms discussed above – definitely of room β – can be tentatively established, most notably on the basis of the ritual deposition of juglets on a platform next to a pillar and the existence of various channels and collecting vessels, e.g. cultic installations, which hint at the repeated performance of libations in room β, seemingly in the context of an actually existing pillar cult in the Minoan Palatial period. Further indications, for instance the direct access to the complex of rooms through the “West Court” being suitable for cultic actions involving a larger community, the possible imposing and “mysterious” impression of room β with its artificial background lighting and most notably the tripartite form of the room and the deliberate use of furnishings to create particular parts of the room ranging from areas visible from the entrance to areas initially

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72 For a proposed reconstruction of room β, see also Pelon 1983, 694, fig. 18.
73 It comprises two column bases in its western part and was probably also furnished with platforms and channels along the wall, remains of which have been found, see Chapouthier 1938, pls. 1, 2, 2.2, 3.1 and 4.1, as well as Pelon 1983, 680, 682 with n. 5; 683; Pelon 1982, 176 with n. 27, 178. Perhaps even a collecting vessel belonged to this room, see Pelon 1982, 176 n. 27: 1980, 54 with pl. 6.1. This could indicate that libations might even have been performed inside this vestibule, perhaps on special occasions, but this must remain uncertain.
74 See supra n. 58 and n. 64.
75 These effects of the sunlight will be treated in more detail in a forthcoming paper especially on this Protopalatial complex of rooms in the palace at Malia, which is due to be published in a commemorative volume in honour of Veit Stürmer.
76 For more details on the surrounding rooms, see Pelon 1984, 881, 884 with fig. 1; Pelon 1980, 235–242 as well as the latest results in Stürmer 2013, 28 and 31 with fig. 7; 12; 33 with n. 21. The reasons for the state of excavation are given by Pelon 1983, 687 n. 23 and Stürmer 2013, 21–2, 26, 28, 33, who mentions also the palace’s major building phases relevant for the investigation of these rooms. For the fruit stands, dating to MM II, and their possible representative significance compare Pelon and Stürmer 1989, 103–6 with fig. 3–11; 109–10; for a rather cultic function, see Stürmer 1992, 160; equally Schiering 1998, 78. For a possible placement of some of the vases in room β, see also supra n. 71.
77 Equally Pelon 1992, 36.
78 Compare also Pelon 1983, 695, who equally hints at the use of the platforms, collecting vessels and juglets during the course of libations. Cf. Pelon 1982, 185 with n. 55, who brings up similar findings and refers to a supposed pillar cult, as it was first coined by Evans (1901, esp. 105–6, 111), and later adopted and revised by Nilsson 1950, esp. 243–48. For a more moderate view, see also Rutkowski 1986, 37–45. The installations in room β superficially resemble those known from the eastern magazines of the Old Palace, which were used to store liquids: In contrast to room β these magazines comprised transverse channels to collect the liquid surplus of vessels standing on them. These transverse channels again ran into a long channel which itself in turn ran lengthwise of the platforms and then ended in a collecting vessel inserted into the floor, as is the case in room β, cf. Pelon 1980, 198–203; 1992, 44–6. All in all, room β is arranged differently to the eastern magazines: There are no transverse channels, equally no magazine compartments with connecting passages can be found, which are common to all magazines and are also found in the western magazines of the same palace. Moreover the eastern magazines were not furnished with plastered walls. Only the width of the platforms and also their height are approx. the same, measuring about 0.7 m (width) and 0.1 m (height); see Pelon 1980, 201, for the eastern magazines; Pelon 1982, 174 with fig. 16; 179; 1983, 687, 689, for room β. This at least implies that the superposition of vessels in room β would have generally been possible. For a comparison of both complexes, see also Pelon 1982, 178, 184; 1983, 695, and also the very first reference to them in Chapouthier 1938, 13.
completely hidden from view, point strongly to a cultic use of room β and presumably also of its annexes α and γ, supported by the occurrence of probable ritual vessels in a further room adjoining the complex of rooms α to γ. The performing of animal sacrifices in these rooms cannot be proven securely, even if some finds might hint at such activities. Consequently, the proposed reconstruction of room β does not include a supposed installation for sacrifices above the cavities. 79

Conclusion

The two examples of possible “cult rooms” presented here reveal the need for treating each room complex separately and as accurately as possible in order to gain sufficient evidence for the involvement of a room in the performance of cultic actions. It is obvious that such actions are difficult to detect in the archaeological record. Nevertheless, by following the criteria mentioned in this paper and also by bearing in mind results from research on the Sociology of Space and from Ritual Studies, it can be possible to focus on a critical interpretation of the archaeological material as a whole instead of uncritically employing the iconographic evidence and relying solely on a presumed cultic symbolism of only specific objects found in a room. In this way, a new basis for identifying cultic actions and thus also “cult rooms”, applicable in future research, can possibly be established.

79 Cf. Pelon 1983, 694, fig. 18 with comment.
Bibliography


Defining Minoan "Cult Rooms"


The Temple Tomb at Knossos is one of the most intriguing and enigmatic buildings of the Minoan world. Possessing characteristics suggestive of both funerary and religious functions, its precise role, nevertheless, remains obscure. With previous interpretations concentrating upon particular architectural features such as its pillared rooms and “sepulchral chamber”, attention has tended to focus upon functional attributions at the expense of social considerations of knowledge, inhabitation and communication. In this paper, I explore how such concepts provide for a reconsideration of its social role. By examining communication and social transformation across metaphysical and physical boundaries, I argue that these were fundamental design considerations in a building that played host to a variety of extended funerary rites.

**Introduction**

As part of a wider study into understanding the significance and role of communication in Late Bronze Age Aegean society, I have been attempting to understand how the multi-modal nature of human communication is reflected in, and structured by, architecture. The Temple Tomb at Knossos seemed to represent a useful starting point for this research. Not only is it, at least superficially, a simple architectural unit from which to begin, but also with Evans’ observation that a section of the Great South Road originally ran close to its eastern boundary, it was clearly functioning within a wider communications network. In this contribution, however, I will concentrate upon the building itself rather than its position in a wider landscape of communication to see whether considering and appreciating aspects of human communication brings us any closer to understanding the social role of the Temple Tomb and other similarly inscrutable structures.

Indeed, after 80 years, the Temple Tomb remains an enigma. Since Evans’ summary publication and the dramatic pronouncement that it was a “royal tomb” for the “priest kings of Knossos”, it has continued to defy any straightforward interpretation. Aside from Nilsson’s rather dismissive statement that this was simply an “old house”, interpretations have tended to sway between, or emphasize one of, the two basic elements apparent in Evans’ naming. For example, in Charlotte Long’s now classic comparative study of the tholos tomb of Apesokari, Hagia Triada Tomb 5 and the Temple Tomb, the latter was described as being used as a “royal tomb” and, in functionally separating the two floors, as a combined shrine and sepulcher. Later, Mervyn Popham was to suggest that it was “originally a shrine”, while Jeffrey Soles categorized it as “one of four monumental house tombs”. In all of these cases the presence, albeit limited, of human remains seemed to preclude any outright dismissal of its use as a tomb, while the architectural form and the quantity of objects associated with ritual appeared to support suggestions that it played host to some form of religious or ceremonial activities. With no scholarly con-
sensus achieved thus far, the more recent designation of “cult building” is entirely understandable. However, with a comprehensive study of this monument in preparation, it remains to be seen how much this state-of-affairs will continue. Indeed, I offer this paper in the full knowledge that some of the conclusions I draw will undoubtedly require reassessment in light of this work.

The Temple Tomb unquestionably possesses a long and complex history and the intriguing suggestion that its foundation may be linked to the presence of an earlier chamber tomb merely serves to reinforce this. Constructed in the MM III phase, the building succumbed to partial destruction during LM IA that resulted in a phase of rebuilding and reorganization. While its subsequent history extends into the LM IIIA period, this paper will predominantly be focusing upon its early phases of use and, hence, attempting to understand the underlying motivation behind its design.

An Architectural Overview

In form and layout, this two story east-west aligned complex appears to be a relatively simple architectural design (figs. 1–4). Aside from the entrance platform, the lower floor essentially consists of five basic elements, while the upper floor only of two (three if the interconnected terraces are considered separately). Using the nomenclature introduced by Evans, a semi-enclosed pavilion formed the eastern boundary of the lower level. To the west, and progressing along the principal axis of movement, an open court fronted the enclosed heart of the building (fig. 1). Continuing westward and passing between the flanking bastions of an imposing doorway, an enclosed hallway is reached. This provided access to an internal staircase that led to the upper floor as well as to the room beyond – the pillar crypt.

In the renovations following the partial destruction, the pillar crypt bore witness to a clear desire to maintain this physical path and, hence, a communications route through the complex. Crudely finished walls constructed between the pillars created bays against its southern flank into which a combination of rubble, human bones and cultural materials was deposited. This ensured that the original axis of movement through the pillar crypt was essentially unaffected, with uninterrupted passage maintained for physical movement between the outermost areas and the final chamber. Here on a slightly different alignment and set a little to the north of the preceding rooms lay the evocatively named sepulchral chamber – the only truly subterranean element of the Temple Tomb.

Immediately above the pillar crypt was an almost identical room described as a pillared sanctuary (fig. 2). The doorway on its eastern façade led to an open roof terrace overlooking the court below and provided access to the stairway originating in the inner hall. Across from this terrace and physically connected by a walkway was a smaller terrace on the roof of the pavilion.

What is clear from this beguilingly simple architectural layout, as well as from the various objects recovered and the general longevity of use that it displays is that this was a building that was intended to be frequently inhabited by the living. The open-air terraces and court clearly evoke situations of group interaction and the kinds of performances, such as music, dancing and drinking, that we might see in much larger theatrical areas. As such, the Temple Tomb must be considered a dynamic social arena in which human communication flourished.

Semiotics and the Structuring of Communication Around the Temple Tomb

From a semiotic perspective too, the Temple Tomb is illed with visual signs of communication. Aside from the monument itself, the most prominent of these were probably the horns of consecration. Whatever problems we may have in interpreting their meaning and symbolic attributes, that meaning would have been readily apparent to those approaching the Temple Tomb. But I will not dwell on these here, simply because it seems more likely that their value was greater to those viewing the Temple Tomb from the outside rather than in guiding the specifics of social engagement within.

Perhaps less obvious, but equally important as visual signiiers, are the materials used in the construction of the Temple Tomb. Our eyes are understandably drawn to the fine limestone and schist paving as well as the impres-

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8 Hatzaki (forthcoming).
10 Evans 1935, 988–92, fig. 943.
Fig. 1 A view westwards from the “Pavilion” across the Temple Tomb complex (photograph by the author).

Fig. 2 The upper room of the Temple Tomb as seen from the adjacent roof terrace (photograph by the author).
sive ashlar walls that form the heart of the complex. But it is equally noticeable that these large, regular blocks of stone were not used to face the outermost walls. And, although poor preservation, as well as the effects of the enforced repairs, makes the complete form of the upper room difficult to reconstruct precisely, neither was this built using ashlar masonry (see figs. 1 and 2). Hence, it is not until you enter into the complex, that the visual and tactile qualities of these finer materials are accessible. From the outside, all of the visible walls would appear to be constructed from irregular limestone blocks and cobbles. There are no obvious architectural reasons why these material distinctions should have been incorporated; it is almost as if the exterior appearance has been deliberately designed to obscure the central section of the building. Indeed, I would suggest that this differentiation was deliberately incorporated not only to separate those within the complex from those without, but also to emphasize the significance of the architectural core of the Temple Tomb.

Moreover, this use of material signification appears to be taken one step further within the heart of the Temple Tomb. From the outer court a casual observer may be forgiven for imagining the entirety of the inner complex to be of ashlar construction. However, the final chamber was, in contrast, clad with gypsum panels with the central pillar also, unlike those in the pillar crypt each constructed from 5 ashlar blocks, carved from this material. But, although these material differences are undoubtedly significant, it is important to qualify this observation. Lighting levels would have progressively worsened the further into the complex you moved. Hence it is questionable whether this difference would have been recognized by sight or even touch. What it does suggest is the embodiment of restricted knowledge within the architecture itself. Hence, it is also necessary for us to consider variations in the knowledge of those who would have been present and, hence, variations in their ability to engage with the Temple Tomb.

Nevertheless, architecturally it is possible to see a broadly triadic structure being imposed upon the complex: in this case from the outside to an intermediate zone and through to the final chamber. But there are other indicators of this structuring of communication and movement that more directly concern the inner rooms. The first relates to their decorative finish. It must be admitted from the outset that the references to painted stucco that I am using almost certainly refer to the decoration of the complex in its final phase of use. However, it does not seem unreasonable, given the attention paid to maintaining the Temple Tomb over the course of its life, to assume that these broadly reflect earlier decorative schemes.

In the outer areas of the court, the natural white of the limestone dominates. Within the semi-enclosed pavilion, Evans reported the presence of red painted stucco – a material that was also liberally used within the two pillar rooms. In contrast the dominant color in the sepulchral chamber appears to have been provided by blue paint applied to the ceiling. It would seem then that the decorative finish of the Temple Tomb utilized the transformative qualities of painting materials in combination with the natural properties of the building stone. In the outer courts the natural colors of these materials dominated the visual register. Within the semi-enclosed space of the pavilion the natural surfaces were augmented and partially transformed by the use of red paint, while in the inner rooms the transformative properties of paint appear to have been dominant.

While these colors cannot be considered to represent the complete painted finish the basic canvas they suggest accords well with the triadic structure mentioned earlier. Furthermore, the use of red within the pillared rooms is significant. Aside from its inherent symbolic connotations, it does not seem likely to be simply coincidence that the analysis of some of the conical cups recovered from the area of the roof terrace showed them to contain traces of red pigment. It would appear, therefore, that this color played a significant semiotic role both in the structuring of space and also in the activities occurring within.

Further indicators of this structuring of communication occur in the form of mason’s marks found at precise locations within the complex. Opposing each other on the flanking bastions between the outer court and inner hallway were finely carved trident signs. While within the pillar crypt, double-axe signs were located on many of the surrounding ashlar surfaces. Unfortunately the full extent of their use remains a matter of conjecture. With only partial preservation of the upper level, we can only speculate as to whether a similar patterning of signs existed at

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12 Evans 1935, 967, 970, 999.
16 Evans 1935, 971–73, 995.
the entrance to, or within, the upper room. Nevertheless, I would suggest that this was, indeed, the case. Given the precision apparent in the lower floor examples, it is not unreasonable to conjecture a similar pattern for the upper pillar room, with trident signs marking the entrance threshold and double-axe signs within.

Yet, even with the limited number of examples available for consideration, the frequently employed secular and, occasionally, more literal interpretations of these “mason’s marks” do not seem especially convincing. In addition to a lack of sign mixing, their positioning appears to have been very specific. With the trident signs arranged in direct opposition on the internal faces of the flanking bastions a symbolic marker has been created. Whether or not each sign type possessed precise meanings or associations these clearly reference a threshold: in this case between the public area of the outer court and the socially more restricted area of the inner hall. A similar arrangement with the double-axe signs in the pillar crypt suggests that these too marked a threshold. And, although mason’s marks only appear in these two areas, the sepulchral chamber also contains an engraving that I suggest similarly references a threshold, to which I shall return later.

**Manipulating Sensory Engagement and Communication Between Worlds**

All of the aforementioned visual and tactile sign vehicles suggest the conceptual ordering of space. Alongside the cellular nature of the architecture, conceptual boundaries have been created that impact upon physical interaction, communication and the right to inhabit certain space. Temporary physical barriers could certainly be instated between areas through the barring of doors, but even with the separating potential they offered, these boundaries were far from impermeable to all forms of communication. It was only in the interruption of visual communication that the doors were fully effective.

Indeed, it seems remarkable that the doors and various locking mechanisms have been viewed as security measures, despite the attention given to the locking mechanism of the inner hall, which provides for barring from the inside only. Understandably, this created some early confusion and prompted the unlikely suggestion that some form of trapdoor directly connected the two pillar rooms. As Evans recognized, such an arrangement was unnecessary with the internal stairway providing access to the upper room. Yet, equally, this provided a potential route from the outer entrance stair to the hall. So the inward facing locking mechanism not only appears superfluous but contrary to the notion of securing access to the heart of the building when it was unoccupied.

With multiple routes and entrances available, this building can hardly be described as being designed to be secure. But, as a means of barring outside engagement with events occurring within particular areas, they are more than adequate. I would argue that this provides a more satisfactory explanation of the motivation behind their design. Their significance, I believe, lay in ensuring restricted participa-

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18 Evans 1935, 993–95.
tion in events occurring behind closed doors with their use controlled by those inhabiting the inner rooms.

Furthermore, when we consider the sight lines in comparison to the main axis of movement, it becomes clear that careful attention was paid to ensuring that no direct line-of-sight existed between the outermost areas and the final chamber (figs. 3 and 4). The slight deviation in the orientation of the entrance passage of the sepulchral chamber and the offsetting of the chamber itself to the north removed the potential for any view of its interior from outside of the pillar crypt. In addition, the positioning of the pillars obscured visual communication between the inner hall and that room. Combined with the intervening doors that could be barred from the inside, great care was taken to ensure that, at least at specific times, no view could be obtained of the interior.

While removing the possibility for visual communication to occur, the doors themselves would not have completely impeded the transmission of other sensory information, such as the sounds or aromas surrounding activities occurring within either of the pillared rooms. Nonetheless, the sequential layout of the rooms would have ensured a progressive deterioration of transmissibility simply through distance. Combined with the multiplying effect of physical barriers this would have made the sepulchral chamber the only space wholly private and devoid of communication with the outside. It does not seem unreasonable to suppose, therefore, that the architects of the Temple Tomb deliberately considered the multi-modal nature of human communication within its overall design. The use of a longitudinal arrangement appears deliberately conceived as a means of ensuring progressively restricted communication, physical or otherwise, with the pillar crypt and, ultimately, the sepulchral chamber.

And it is with this chamber that I suggest we come face-to-face with the importance of considering human communication in the architectural design process. As was mentioned earlier, the special character of this room is clear from the change in alignment from the main complex, the significant northerly offset from the primary axis of movement and the further emphasis provided by the construction materials utilized. But perhaps more intriguing is the lack of finishing applied to the ceiling of the chamber. Viewed as it has been re-constructed, the smooth blue-painted concrete surface gives a deceptive impression of the original finish. Originally, paint was applied to the uneven and unclad surface of the overhanging rock face left accessible in the interstices of the ceiling joists. Evans attempted to rationalize its seemingly crude character as a consequence of concerns with rock stability. Yet this does not explain why the architects chose not to use the ceiling joists to support some form of false ceiling, particularly when the surrounding walls had been subject not just to deliberate encasement, but also to a clear desire to ensure a high quality finish. I would argue, therefore, that in retaining this “crude” surface the architects intended a tangible link to the living rock to be maintained. Indeed, it is perhaps significant in this regard that the central pillar was itself placed within a recess in the floor slabs such that it too maintained a closer degree of contact with the living rock.

Recalling the suggestion that this chamber may have been fashioned from an earlier chamber tomb, it does not seem implausible to suppose that in providing tangible references to the underlying rock surface a physical connection to that earlier tomb was intended. In other words, were these characteristics a means of establishing a metaphysical communications “pathway” to a world beyond the confines of the Temple Tomb?

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19 Evans 1935, 975.
This may seem a somewhat speculative line of reasoning, but an intriguing observation made by Evans suggests that we do need to consider the architectural design as mediating communication between both the physical and the metaphysical worlds. For within the sepulchral chamber he noted the presence of a partial engraving of a ship on the gypsum cladding. Dismissed as an “incomplete graffito sketch”, it received little attention in the original publication. Yet its reported position, engraved on a gypsum slab on the rear wall immediately facing the entrance, suggests that it should not be so casually ignored.

With the image of a ship we continue the emphasis on journeying and communication. Clearly this mode of travel and communication does not reflect any real journey that would have been made through the Temple Tomb. However, as has been recognized with ship imagery on painted larnakes, it does correspond to the notion of the departed soul crossing the sea to an afterworld. If we accept this as a possible reason for its appearance then its incomplete form may have been meant to be representative of the transition between the physical world and an afterworld. In other words, was this a representation of a journey begun at the entrance to the Temple Tomb being played out to its logical conclusion – one that went beyond the physical limits of the Temple Tomb and was impossible for the living to take? I suggest that it is.

In the darkness of the chamber it is doubtful whether the blue painted ceiling or the engraving would have been, or were intended to be, seen. As signs primarily related to visual communication both appear superfluous. However, physical engagement need not have been necessary if knowledge of their existence was sufficient, particularly if these signs were considered to be a form of communication beyond the real world. Indeed, I would suggest that the restriction of knowledge and communication surrounding this chamber was essential. Even in the entrance passage, where a reduction in ceiling height occurs (see fig. 4), there is the sense of restricted knowledge being required to engage safely with this space.

In acknowledging the potential for metaphysical communication to be a significant issue, we should not ignore the pillars of the pillar crypt and upper room. Aside from whether similar mason’s marks originally existed in the upper room, the internal arrangement and finish of the two rooms is remarkably alike. Both were found to have been decorated with red painted stucco, their respective spatial scales appear to be the same and, although only one column base was recovered from the upper room, it is reasonable to suppose that it originally contained two pillars placed directly above those of the lower pillar crypt. It is therefore no great leap to imagine connected activities occurring within these rooms – a connection that may have had a metaphysical component through the symbolic positioning of the respective pillars.

Reconsidering the Social Role of the Temple Tomb

Having explored some of the communicative aspects of the building, albeit very briefly, would I interpret the Temple Tomb as having been designed and conceived of as a tomb? In short, my answer would be no. The human remains found in the crude bays of the pillar crypt, in my opinion, only provide evidence for the retention of a particular group of bones that in all likelihood had fallen from the room above. While they clearly demonstrate a role for the building within the funerary world of Neopalatial Knossos it must be at least questioned as to whether their retention was determined by the destructive event, rather than to some preconceived intent to inter the bones within the Temple Tomb. Hence, I would argue that while this building was related to funerary practices it functioned as much, if not more, for the living.

In her book “Minoan Religion”, Nanno Marinatos made the suggestion that a similar pattern of human remains in the pillar crypt of Archanes Tholos B was potentially a sign of the remains of the dead having been brought to the complex for treatment prior to secondary burial. It is these types of practices that I believe unlock the riddles of the Temple Tomb. Indeed, I would suggest that the entire complex was designed to play host to all of the preparatory processes, rituals and performances surrounding secondary burial, whatever the precise form they may have taken over time. The architectural emphasis on structuring communication in both the physical and metaphysical worlds as well as ensuring progressively restricted social engagement suggests that we need to envisage the Temple Tomb as a venue for equally progressively restricted ceremonial practices.

20 Evans 1935, 956, n. 2; suppl. pl. LXVIIb.
21 E.g Watrous 1991, 298.
23 Marinatos 1993, 91.
One such scenario to contemplate is the provisioning of performances and extended rites surrounding the dead and in particular the preparation of secondary burials. Hence, we might conjecture that the passage through the lower floor to the pillar crypt was the route by which the dead were brought in for preparation. The sepulchral chamber, filled with the semiotics of metaphysical engagement, would have represented a transitional space in which the soul of the deceased would move on from the physical world. From here, the soulless remains could be brought back in the opposite direction to the inner hall and pass to the upper pillar room where final preparations prior to secondary interment elsewhere could take place. And it is just such a situation that I suggest had occurred immediately prior to the partial destruction of the complex, with the remains of several individuals having been removed to the upper room prior to their interment elsewhere. It is these remains that would have fallen through into the lower pillar crypt when the Temple Tomb was rocked by an earthquake.

This paper marks only the early stages of research into the complexities of human communication in the past. Nevertheless, there is, I believe, the potential for such research to be applied on both a wider geographical and chronological scale. Within Crete for example, the parallels between the Temple Tomb and structures such as Hagia Triada Tomb 5 and Tholos B at Archanes have long been recognized and suggest that similar issues need to be investigated in these cases. In attempting to approach a diachronic perspective it also seems plausible to include such monuments as the Isopata Royal Tomb and the Kephala tholos tomb, which clearly contain many common features. These certainly prompt the question of whether the concepts embodied in the Temple Tomb provided the foundations for architectural design in later years. However, as I have argued, such studies cannot be restricted solely to communication in the physical world. Indeed, I believe that it is the relationship between communication in the physical and metaphysical worlds that has the potential to unlock some of the mysteries surrounding the more enigmatic aspects of Minoan architecture and society.

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24 See also Gesell 1985, 29.
27 Hutchinson 1956; Preston 2005.
Bibliography


This paper contributes to the ongoing discussion about the nature of the changes in material culture that occurred on the island of Crete following the LM IB destructions but this time from an architectural perspective. The purpose of the paper is, on the one hand, to examine the factors (regional, economic, political, ideological) that shaped architecture outside Knossos in the Final Palatial period, and, on the other hand, to explore some of the mechanisms involved in constructing identity through architecture in LM IIIA–B Crete. The focus of the discussion is House He, a Mycenaean-style “Corridor Building”, which, based on the recent excavations, was constructed in the LM IIIA1/2 period at Gournia. The architecture of House He is critically examined and evaluated within its settlement and regional context and in relation to other contemporary buildings in Crete. The evidence suggests that the architectural transformations that occurred on Crete in the Final Palatial period were complex, context-specific, and regionally diverse and often changed over time.

Introduction

In the last decade, research on Final Palatial Crete has been characterized by a conceptual shift from focusing on ethnicity to explain the cultural transformations that occurred on the island after the LM IB destructions but to investigating instead the ways material culture was used and adapted to suit new political and ideological agendas.\(^1\) A decisive step toward this new approach to changes in material culture on the island of Crete was the mere recognition that “Minoan” elements remained predominant in the LM II–IIIA2 period, especially in the architecture at Knossos.\(^2\) Indeed, mainland-derived building forms including the megaron unit were never constructed at Knossos. Conversely, Neopalatial buildings were repaired and reoccupied and a few new structures were built which incorporated elements, materials, and forms that drew heavily upon earlier local traditions.

The incorporation of certain architectural features in a building while avoiding others implies meaningful decisions. Architecture as material culture provides a variety of symbolic forms from which individuals may choose in order to project a desired identity and create an identity.\(^3\) At Knossos in the Final Palatial period, the predominance of Minoan-style architecture and the fusion of Cretan and mainland-inspired elements observed in other forms of material culture (e.g., burials, iconography) are thought to have functioned as an integrative mechanism set forward by the new Knossian regime in order to secure the allegiance of local elites.\(^4\) By appropriating elements from the Minoan past the new rulers forged an identity representing them as rightful successors to an earlier Minoan authority. At Knossos, therefore, reoccupying Neopalatial buildings and reusing “Minoan” ashlar poros blocks in LM IIIA buildings was a strategy that offered a great political advantage with relatively little investment. Yet this architectural strategy was not employed throughout Crete. At Hagia Triada, for example, Megaron ABCD was a massive new construction of a typical mainland architectural form (i.e., the megaron unit). It is significant, however, that this megaron unit was built with “Minoan” ashlar blocks and was deliberately placed over the walls of the Neopalatial villa.\(^5\) At Mochlos, the LM III structures were also new but rather modest constructions with no particular architectural affinities. With the exception of House A (LM II–IIIA early) which utilized part of an earlier building and was identified as the residence of a Knossian official, Neopalatial buildings were not reoccupied.\(^6\) At Gournia, the plan of House He (LM III) was that of a Mycenaean “corridor building” employing al-

\(^{1}\) Brogan et al. 2002; Preston 2004; Burke 2005; Driessen and Langohr 2007; McEnroe 2010.


\(^{3}\) Rapoport 1969, 1990; McEnroe 2010.

\(^{4}\) Driessen and Langohr 2007.


\(^{6}\) Brogan et al. 2002; Smith 2005; Soles et al. 2008.
most exclusively mainland-derived building materials and techniques. At other excavated sites including Tylissos, Malia, Pseira, and Palaikastro, the LM III reoccupation took place primarily in earlier Minoan houses after some repair and remodeling. The data, therefore, albeit limited, illustrate a remarkable diversity in the way architecture (forms, materials, techniques) was used in LM III Crete, and thus, raise the question concerning what factors (economic, regional, ideological, political) shaped architecture outside Knossos in the Final and Post Palatial period.

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8 McEnroe 2010.
Any assessment of the LM IIIA architecture is constrained by the difficulty in assessing the extent and nature of Knossian control over the island.\(^9\) Today, several scholars agree that in LM II a group from mainland Greece took over the palace at Knossos and in the following period (LM IIIA1/A2 early) extended their influence over much of Crete.\(^8\) Recent work on the ceramics from Mochlos and Palaikastro has shown that Eastern Crete and the Mirabello region were part of the Knossian territory in LM IIIA or had, at least, economic and/or ideological ties to Knossos.\(^10\) Indeed, the LM II–IIIA Knossian authority is understood more as an economic enterprise rather than a territorial state.\(^11\)

Thus, in light of new archaeological evidence and the theoretical approaches to changes in the material culture on the island, it is useful to reconsider the significance of mainland-derived architectural forms in LM III Eastern Crete and particularly House He at Gournia. My involvement in the LM III architecture at Gournia began a few years ago, while I was working on my doctoral dissertation on Mycenaean “corridor buildings” at the University at Buffalo.\(^12\) I recall being for a long time troubled by the degree to which House He exhibited Mycenaean affinities, quite unlike any other LM III building on Crete. In 2008, when I was a fellow at the American School of Classical Studies in Athens, Tom Brogan, Director of the Institute for Aegean Prehistory Study Center for East Crete, kindly informed me about the existence of some unpublished pottery from a minor excavation undertaken by Costis Davaras in 1984 immediately south of House He.\(^13\) My examination of this pottery in summer 2008, in collaboration with my advisor L. Vance Watrous, revealed a few sherds that could be dated to the LM IIIA1/A2 period, thus suggesting that the reoccupation of Gournia and the construction of House He in the Final Palatial period (LM IIIA1/A2 early) were possible. This new evidence permitted me to place the architecture of House He within a different sociopolitical and ideological context, particularly since until that point House He had been described in archaeological literature as a LM IIIB structure. Drawing upon architectural, ceramic, settlement, and regional data, I suggested an early date of construction for House He (LM IIIA) and the existence of two occupational phases of the building corresponding to the Final and Post Palatial periods respectively in my paper at the Heidelberg conference. In summer 2011, a few months after the conference at Heidelberg, I supervised the excavation of House He as part of the Gournia Excavations Project under the direction of L. Vance Watrous. One of the main goals of this excavation was to date the construction of House He. The results produced evidence for a construction date in the LM IIIA1/A2 period thus confirming my original hypothesis. The excavation report will be published by Watrous, the author, and others in a forthcoming issue of *Hesperia*. In this article, I will only present my thoughts on the ideological, social, and political significance of House He based on an architectural and contextual analysis of the building. Through this discussion, my goal is to explore some of the ways in which architecture was used to construct identity in LM III Gournia.

Toward a Meaningful Architecture: Revisiting House He at Gournia

After the LM IB destructions, reoccupation at Gournia took place in the northwest and southwest part of the Neopalatial settlement (fig. 1).\(^14\) Specifically, two to three new buildings were constructed (House He, House Eh, and possibly House Hf);\(^15\) a three-room structure was built over the ruins of the LM I House Ei;\(^16\) and a Neopalatial building (House Ej: spaces 61–66) was reoccupied.\(^17\) The date of reoccupation at Gournia could not be established.

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\(^10\) On the date of destruction of the palace at Knossos, see Popham 1997. For extensive bibliographic references on this topic, see Rehak and Younger 2001; Brogan et al. 2002, 89–90.

\(^11\) MacGillivray 1997a, 1997b; Soles 1999; Brogan et al. 2002; Smith 2005, 190; MacGillivray et al. 2007; Soles et al. 2008, 185, 203.

\(^12\) According to Driessen (2001), the economy of LM II–IIIA2 (early) Knossos was predominantly geared toward the acquisition and accumulation of prestige goods, especially metal vases and weapons in exchange for elaborate textiles.

\(^13\) Pantou 2011.

\(^14\) I would like to thank Dr Brogan for bringing this pottery to my attention and for allowing me to examine and mention it in my thesis.

\(^15\) Boyd Hawes 1908; Fotou 1993, plan B.

\(^16\) On House Eh, see Fotou 1993, 81–104. House Hf is located a few meters to the east of House He. It was dated by Boyd Hawes to the LM I period, although she acknowledged the possibility of a later date possibly in LM III (Boyd Hawes 1908, 26). A bronze dagger from Hf (Boyd Hawes 1908, pl. IV: 61) could be dated to LM IIIA–B (Fotou 1993, 96). During the Gournia survey, Watrous (personal communication) and his team found a LM IIIB–C deep bowl next to House Hf.

\(^17\) Boyd Hawes 1908, 23. The east-west walls of the room in front of E 55 crossed the West Ridge Road over the pavement and were removed early in the excavations under the impression that they were modern.

\(^18\) A LM III burial was found in E 58: A larnax (Boyd Hawes 1908, pl. X: 45), a composite vessel (Boyd Hawes 1908, pl. X: 6), and a figurine (Boyd Hawes 1908, pl. X: 11) were reported. The pyxis (Boyd Hawes 1908, pl. X: 5) possibly comes from this context, too.
on the basis of stratigraphic evidence. Excavating over a century ago, Boyd recorded from House He only whole or restorable vessels that likely represented the final floor deposit. Based on these finds, House He has been commonly described as a LM IIIB building.19 Rather than dating the construction of House He, however, the published finds more likely reflect the date of its destruction.

Based on the results of the 2011 excavations, House He was constructed in the LM IIIA1/A2 period (fig. 2). The deposits excavated by Davaras south of House He included fragments of ledge-rimmed kylikes and cups, a pulled-rim bowl, shallow bowls, and dippers dating to the LM IIIA1/A2 periods.20 A LM IIIA1 stand from Gournia has also been illustrated by Evans.21 A date of reoccupation at Gournia in the LM IIIA1/A2 period would also be consistent with the regional data, since stratigraphic evidence from Mochlos, Pseira, and Palaikastro has shown that this part of the inland was re-inhabited as early as LM II–III A1.22

House He was built at the southwest edge of the Neopalatial settlement with a different orientation (northeast to southwest) from the structures of the LM IB town and the palace. It was built in typical Mycenaean fashion with large (ca. 1 x 0.45 m) partially trimmed boulders laid roughly in courses with smaller stones set in the interstices (fig. 3).23 The megaron unit consisted of a main room (Room 32, 6.30 x 5.50 m) and a porch (Room 31, 3.90 x 5.50 m) and was laid out with great care in straight lines and with walls built at right angles. On the east, the porch communicated with a long corridor (11 x 1.80 m), which opened onto several smaller rooms. All the doorways had cut limestone or schist thresholds. Timber was used for doorjams resting on the thresholds. Hardened pebble floors were found in the megaron unit. Based on these characteristics, House He contrasted architecturally with the LM IB authority at Gournia. The overall plan and the building materials reflect an association with Mycenaean practices rather than an adherence to earlier Minoan traditions. Furthermore, the size and meticulous construction of House He, the erection of other large houses (House Eh and possibly House Hf), and the reoccupation of an earlier substantial LM I building (House Ej) suggest an organized and structured reoccupation of the site not by mainland invaders as one might argue for other nearby sites (i.e., Pseira), but rather by settlers who could have been sent to Gournia under Knossian direction. An organized (re)occupation may also be observed at Hagia Triada. But, while Megaron ABCD appears as a legitimate architectural successor of the earlier authority at the settlement (the building is placed directly upon the Neopalatial villa and incorporates ashlar blocks and masons’ marks), the location, orientation, plan, and building material of House He at Gournia all set it apart from the LM I buildings and the palace.

The function of House He is difficult to establish on the basis of architectural evidence alone but accommodating group gatherings could have been one primary purpose. Architecturally, this is suggested by the size and accessibility of the structure, the spacious Room 32, the open porch (Room 31), and the area in front of the megaron unit which were all suitable for large-scale social interaction. Some of the early pottery recovered in Davaras’ trenches included fragments of kylikes, cups, deep bowls, dippers, and cooking pots which may reflect drinking and eating

19 For the finds of Boyd’s “Reoccupation Period”, see Boyd Hawes 1908, pl. X. There is no agreement as to the date of House He. In her study of LM III architecture in Crete, Hayden (1981, 25) dated House He to the LH IIIB period. Recent studies including Tsipopoulou (2005, 315) and Driessen and Langohr (2007, 184) also provide a LM IIIIB date for House He. More recently, McEnroe (2010) suggested a LM IIIA2–IIIB date. Rehak and Younger (2001, 443) dated House He to the Final Palatial period (LM IIIA) according to the criteria on which they based this chronology were not stated.

20 In 1984, Costis Davaras continued the excavation of House He by opening four trenches immediately to the south of the excavated structure. In a short excavation season, he uncovered the south wall of Rooms 38 and 33, and the south end of the east wall of Room 31. For a list of diagnostic sherds from Davaras’ excavation, see Pantou 2011. For similar in profile LM IIIA1 ledge-rimmed cups, see Betancourt et al. 1997, 62–3, fig. 2. 28–29. For a similar in profile LM IIIA1 shallow bowl, see MacGillivray et al. 2007, 155, fig. 5.7: 560. Kylikes, shallow bowls, and dippers are new (LM III) shapes: Brogan et al. 2002, 110; Smith 2005; Soles et al. 2008.

21 Evans 1928, 134, 139, fig. 70. The fragments of this vessel were found in 1924 by R.B. Seager in a heap of debris. The stand has the form of a round tower and its painted decoration is typical of the late LM II.


23 A dressed stone was found at the end of the eastern anta of Room 31 and at the exterior southwest corner of Room 34.
ceremonies. From this view, House He could have been a civic building that played an important role in the organization of the LM IIIA1/A2 community functioning as a gathering place.

It is significant that a small wall (ca. 2.10 m long) built with reused ashlar blocks was constructed at the southwest corner of the porch (fig. 4).\textsuperscript{24} This ashlar wall clearly abuts the west wall of the megaron unit suggesting that it was a later addition. The absence of a similar wall on the east also suggests that this wall is an oddity and part of remodeling rather than the original plan.\textsuperscript{25} Without a second spur wall to form some sort of an entrance, as is common in megaron units, the purpose of the ashlar wall would have been symbolic. It is worth noting that the ashlar wall was placed strategically at the entrance of the megaron unit for maximum visual impact, a unit which was the most conspicuous and socially important part of the structure. It is also notable that not only were poros ashlar blocks employed, presumably quarried from the LM IB palace, but also it was built in typical Minoan fashion with different exterior and interior faces.\textsuperscript{26}

Insights as to the symbolic significance of this ashlar wall may be obtained by considering how poros ashlar masonry was used during the same period on the Greek mainland. While poros ashlar blocks were introduced to the mainland in LH II and became popular in the early Mycenaean palaces, in the LH IIIA2–B period they ceased being produced. Although some poros ashlar blocks were reused in the LH IIIB Mycenaean palaces, these blocks were either coated with plaster or incorporated in the walls as random building material without them forming a flat surface or even being actually visible. At Mycenae, in particular, the LH IIIA2–B rulers introduced the use of conglomerate ashlar which was conspicuously used in the palace, the Lion Gate, and the façades of the royal tholos tombs. This change has been interpreted by several scholars as an attempt by the mainland rulers to shake off a “foreign” (i.e. “Minoan”) connotation implied by the

\textsuperscript{24} This wall was uncovered during Davaras’ excavation. Boyd’s plan of the site falsely depicts a wall stretching along the entire south side of Room 31.

\textsuperscript{25} It is significant to stress that in other mainland-derived architectural forms in Crete such as Megaron ABCD and the “corridor building” identified by Cucuzza (1997) at Hagia Triada, the ashlar blocks were part of the original plan of the structures and not later additions as is the case with House He.

\textsuperscript{26} See Nelson 2007, 159.
use of Minoan-style ashlar poros blocks and to construct their own “Mycenaean” identity.\textsuperscript{27} If this interpretation is correct, then at Gournia the opposite phenomenon might be witnessed. The inhabitants of House He might have sought to reconnect to earlier local architectural traditions and the “Minoan” identity by (re)using poros ashlar blocks at a conspicuous part of a Mycenaean-style building.

The re-establishment of cultural identity through architectural remodeling at the entrance of a building as observed at House He finds a historical parallel in pre-industrial Crete. In the late 19th – early 20th centuries, several Cretan households in the Mesara region molded a Christian cross or Greek classical motifs such as triglyphs, volutes, and rosettes on the entrance lintel-stone.\textsuperscript{28} This architectural addition was an attempt by Cretans to re-establish and express a “Greek” identity and chronologically corresponded to the period following the departure of the Turks from Crete (1898). Similarly, in LM III Crete, the collapse of the centralized Knossian power led to a period of political fragmentation, growing regionalism, and the emergence of a renewed “Minoan” identity.\textsuperscript{29} What I am suggesting, therefore, is that the remodeling in the porch of House He could have been a reflection of a cultural and ideological change related to the destruction of Knossos in LM IIIA2 (early) and the emergence of a renewed “Minoan” identity.

Whether the remodeling of House He also marked a new group of residents and/or a change in the overall function of the building is not easy to establish. If House He originally served as a place for community gathering, the addition of a wall blocking, in part, the entrance to the megaron unit could be seen as an exclusionary architectural strategy signifying the transformation of a public building into a private structure.\textsuperscript{30} The wall physically and symbolically marked the transition from what was likely a communal space (south of the megaron unit) into what could have now been privately owned or controlled (the megaron unit itself). The transformation of an open porch into an enclosed space is an architectural practice attested on the mainland in the “corridor building” at Dimini (Megaron A), where it was paired with the construction of an interior court in front of the megaron unit.\textsuperscript{31} If this was also the case in House He, then it could explain the presence of the large stone threshold with two pivot holes that was found immediately to the west of the porch.\textsuperscript{32} This entrance could have been part of the same remodeling and could have served to provide access to a confined interior court. In this reconstruction, the wall flanking the threshold on the west could have continued south and then east to form the exterior wall of the proposed court.\textsuperscript{33}

In addition to the architectural evidence, the published finds from the LM IIIB floor deposit in House He are consistent with assemblages from private elite houses of the time and reflect industrial, storage, and trading activities associated with liquids (wine and/or olive oil). Boyd, Kanta, and Fotou reported five stirrup vases, a transport amphora, a pair of horns of consecration (in Room 34) and a small bull figurine (outside the north façade).\textsuperscript{34} Two of these stirrup jars were imported from Chania and the mainland.\textsuperscript{35} The pottery from Davaras’ excavation also included a fragment of an imported transport amphora, as well as fragments of several small stirrup jars, spouted decorated basins, unpainted jars and amphorae, pithoi, and a fragment of the spout of a big clay vat which could have been used for pressing wine. Taking all these into consideration, House He could have been a public building representing Knossian/Mycenaean authority at Gournia during the first architectural/occupational phase (LM IIIA1–A2 early). In the second phase (LM IIIA2 late/IIIB), House He was privatized and “Minoanized”, to a certain degree, and could have been occupied by emerging regional elites seizing economic opportunities that arose after the collapse of the centralized power at Knossos.

**House He in Context: Architectural Strategies and Regionalism in LM III Crete**

The LM II–IIIA building program at Knossos involved using and adapting existing architecture. Neopalatial buildings were repaired and remodeled using old materials and techniques (gypsum, polychyton). The few new structures built in LM IIIA1/A2 also employed traditional forms and local materials, as is the case with the so-called

\textsuperscript{27} Wright 2006, 57–60; Nelson 2007, 159; Fitzsimons 2007, 109–14.

\textsuperscript{28} For a detailed description of this architecture and its social significance, see Watrous et al. (forthcoming).

\textsuperscript{29} This is the view of several papers in D’Agata and Moody 2005.

\textsuperscript{30} On exclusionary architectural strategies, see Blanton 1998, 160.

\textsuperscript{31} For a discussion on these architectural changes and their significance, see Pantou 2011, 209–22.

\textsuperscript{32} For a depiction of the threshold, see Fotou 1993, plan B.

\textsuperscript{33} While one would expect the main entrance to be on the south short side of the building, the west entrance could be explained as a way to enter House He from a point closer to the town rather than walking around the building to enter it from the south.

\textsuperscript{34} Boyd Hawes 1908, 23, pl. X; Kanta 1980, 139–40; Fotou 1993, 95–6.

\textsuperscript{35} Boyd Hawes 1908, pl. X: 1, 2; Kanta 1980, 140.
“dancing platforms”36. The Knossian architectural strategies suggest that Minoan architectural affinities were as important to the legitimization of the new ruling elite as the mainland-derived elements observed in other types of material culture (i.e., the “warrior graves” and the Mycenaean drinking traditions) which were reflections of the new organizational structure.37

Outside Knossos, the architectural data of the LM IIIA period reveal a great degree of variability in the way built environment was constructed, adapted, and (re)used (see Table 1). At Tylissos, Kommos, Mochlos, and Palaiakastro reoccupation took place within older buildings and new constructions were rare. At these sites, the local trends repeated, to a certain degree, Knossian practices. At Malia, Quartier Nu was constructed at the end of LM IIIA2.38 The complex was carefully planned and incorporated some features of the Minoan tradition such as the central court and the (reused) ashlar blocks. The building, however, exhibited a number of mainland-derived features: axially placed entrances, hearths, and columns. At Plati, Buildings A, B, and C also incorporated elements from both architectural traditions: the central court (if the three buildings formed a single complex), well-dressed masonry, the corridor between two sets of rooms, and the large monolithic thresholds.39 At Hagia Triada, mainland architectural forms were introduced (megaron units and “corridor buildings”) but they were masked by Minoan characteristics (ashlar blocks, paving slabs set in mortar, double window, gypsum bench with triglyph designs, double-axe masons’ marks). Megaron ABCD, Shrine H, and Stoa FG were all constructed around the earlier Piazzale dei Sacelli. Building P and the Northwest Building, which have been recently reconstructed as a single unit,40 form a Mycenaean-type “corridor building” with a megaron unit (Building P) flanked by a corridor and smaller rooms (Northwest Building).41 The complex was built in LM IIIA2 and was destroyed in LM IIIB.42 The east wall of the megaron unit was preserved up to the first course above the foundation and had an ashlar face made of reused limestone blocks.43 Unlike House He, the ashlar masonry in this “corridor building” belonged to the original plan and was not part of remodeling. From this view, the architecture of Megaron ABCD and Building P/Northwest Building at Hagia Triada communicated two messages by merging Mycenaean and Minoan architectural traditions: on the one hand, reference to the Minoan past emphasized the political legitimacy of the successors of the earlier authority at the settlement, while, on the other hand, Mycenaean forms stressed their affinity with the new elite.

| Knossos | utilization and adaptation of existing architecture; construction of buildings incorporating elements, materials, and forms that draw heavily upon earlier local traditions |
| Hagia Triada | mainland-derived architectural forms (Megaron ABCD, Building P/Northwest Building) with elements referring to the Minoan past (ashlar, masons’ marks, gypsum); construction of buildings (Shrine H) with a mixture of Minoan and mainland architectural elements (e.g., painted floor, polythyron, ashlar masonry, and half-timbered building system) |
| Kommos, Mochlos, Palaiakastro, Tylissos | reoccupation and adaptation of older buildings (Palaiakastro: Tylissos: Villa A and B; Kommos: House N; Mochlos: House A); construction of buildings with no particular architectural affinities (Kommos: Building P) |
| Malia Quartier Nu, Plati | construction of buildings with a mixture of Minoan and mainland architectural elements |
| Gournia | mainland-derived architectural form, masonry, and building technique (House He in the Final Palatial period); construction of buildings with no particular architectural affinities (House Eh, Ei); reoccupation and adaptation of older buildings (House Ej) |

### Table 1: Architectural strategies in LM III Crete.

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36 On the architecture of the LM IIIA1/A2 “dancing platforms” at Knossos, see Warren 1984.
37 On the role of the “warrior graves” and Mycenaean drinking traditions at Knossos, see Preston 2004.
38 Driessen and Farnoux 1994.
39 Dawkins 1913–1914.
40 Cucuzza 1997.
41 The Northwest Building was located immediately to the west of Building P. The two structures were separated by a long corridor, which on the north turns west. The Northwest Building comprised six square rooms placed in three rows of two. A set of three more rooms, which lay side-by-side on the east-west axis of the building, were excavated to the north of the corridor. These spaces did not yield evidence for wall openings and were most likely basement rooms. According to Cucuzza (1997, 78), the level of the upper floor over these basement rooms corresponded to the ground floor of the megaron unit (Building P). The same arrangement can be seen in the LH IIIB1 “corridor buildings” at Mycenae and especially the House of the Oil Merchant. The small square basement rooms of the Northwest Building resemble those at Panagia House II at Mycenae and could have functioned as storerooms.
42 Cucuzza 1997, 75.
43 Three rectangular dowel holes on the reused ashlar blocks indicate possible use of the half-timbered system.
In short, the available data from LM IIIA Crete reflect either a continuation of earlier architectural practices, the construction of buildings with no particular architectural affinities, or a mixture (in varying degrees) of local and mainland traditions. In this context, then, House He at Gournia stands as an isolated example. Not only the architecture of House He was exclusively mainland-inspired but also the other structures at Gournia did not exhibit “Minoan” affinities and the LM I palace complex and its court remained unoccupied. Why then was it not important for the settlers at Gournia to forge a link with the local past?

If Knossos extended its political and/or economic control in Eastern Crete in LM IIIA as recent research suggests, what we encounter may have been material reflections of the flexibility and variability with which Knossian rulers governed their provinces. Knossian architectural strategies of governance and integration could have been determined and shaped by regional circumstances at the time or by the fact that different regions were incorporated at different phases in the process of Knossian political development. Based on present data, the site of Gournia was reoccupied comparatively later (LM IIIA1/A2 early?) than other settlements in Eastern Crete (e.g., Mochlos), when the new rulers had perhaps consolidated their authority. This in turn suggests that Knossian architectural strategies of integration that would draw upon Minoan and local traditions might not have been equally necessary.

Another factor determining Knossian architectural strategies could have been the population density in the various regions, the extent to which integration was resisted by local people, and the specific resources that the Knossian authority sought to exploit. In the Mirabello region, the drop in LM IIIA–B site numbers identified by the Gournia Survey reflects severe depopulation following the LM IB period. During the Neopalatial period, there had been 72 settlements (7 villages, 27 hamlets, 16 farms, 22 fieldsites). In the LM IIIA–B period, only two hamlets, one farm, and two fieldsites were identified, which represents an 86% decline in the number of settlements. With the exception of Gournia, there were no settlements in the coastal area from Kavousi to Pacheia Ammos, and the LM IIIA–B sites were all located inland. The hamlet-sized site southeast of Kato Chorio identified by Watrous and his team was newly settled in LM IIIA and was situated on a steep, high hill protected by fortification walls.

This settlement pattern indicates that the population in the Mirabello region in LM IIIA consisted of two separate groups: the native population which had retreated to the inland sites and the new settlers who occupied Gournia. Moreover, the settlement pattern suggests a low level of integration between the two population groups, which would have rendered any visual and architectural affiliation with the earlier “Minoan” elite at Gournia unnecessary. Lastly, this pattern of settlement indicates that the reoccupation of Gournia was geared toward the exploitation of maritime rather than agricultural resources. If the main purpose of Gournia in the LM IIIA period was to serve as a trade post, then this perhaps could explain the lack of toponyms from the Mirabello region in the Knossian archives, as they were primarily concerned with recording agricultural and animal resources and produce.

In the period following the collapse of the centralized power at Knossos, it is possible that elements of the local population returned to Gournia. The small public shrine at Gournia dates to this period (LM IIIB) and its location immediately to the north of the LM I palace could have been an attempt to reconnect to earlier local traditions emphasizing the importance of the Neopalatial palace complex as a religious focus of the LM IIIB town. This development coincides with the privatization of House He which reflects a new organizational structure as well as an ideological shift toward traditional and local practices as indicated by architectural remodeling (addition of the ashlar wall) and the horns of consecration found in the LM IIIB floor deposit in Room 34 of House He.

Concluding Remarks

Following the LM I destructions on Crete, changes in architecture aimed at the formation of a new identity that borrowed forms from the Neopalatial period and the mainland, and which ultimately served the needs of the new Knossian authority. Available data reflect a remarkable variability in the way built environment was constructed, adapted, and (re)used: continuation of earlier architectural practices, the construction of new buildings with no

44 On the territorial extent of the kingdom of Knossos and how it changed through time and the incorporation of eastern parts of Crete, see Driessen 2001, 111.
45 For a discussion on strategies of incorporation and governance in the archaic states of the New World, see Morris 1998.
46 Watrous et al. 2012.
47 On the shrine, see Boyd Hawes 1908, 47–8, pl. XI; Gesell 1985. The shrine was a one-room space (about 3 x 4 m) accessible through a small paved street (1.50 m wide) that ran east towards the summit of the hill and terminated in three steps leading to the shrine. Inside this room, Boyd Hawes found a plastered terracotta offering table, snake tubes (lamps or incense burners), remains of shells, and fragments of terracotta figurines with upraised arms placed on a bench. According to Gesell (1985, 43, 72, pl. 119), the building itself could have been LM I but the objects should be dated to the LM IIIB.
particular architectural affinities, a mixture of local and mainland traditions, and the introduction of new mainland-derived forms. Further study is necessary to assess how and why architectural strategies in Crete varied regionally and chronologically from the Final to the Post Palatial period. This paper focused on the LM IIIA–B architecture of House He at Gournia. It was argued that in the Final Palatial period regional circumstances (economic, political, settlement pattern, population) favored the introduction of mainland architectural forms, materials, and techniques. The emergence of a renewed “Minoan” identity at Gournia was reflected in the architectural remodeling of House He following the collapse of the centralized power at Knossos (LM IIIA2 late/IIIB).

Based on the evidence discussed, the study of architecture that involves both an analysis of symbolic features and a contextual/regional assessment can be instructive in understanding some of the mechanisms involved in constructing identity through architecture in LM III Crete. The data suggest that approaches to architecture that emphasize the “hybrid” (Minoan/Mycenaean) character of the LM IIIA–B buildings in Crete can mask regional dynamics and individual agency. The architectural transformations that occurred on Crete in the Final Palatial period and the Knossian architectural strategies were complex, context-specific, and regionally diverse.
Bibliography


Peer Pressure

Social Structures from a “Minoan” Perspective
Evans, rather than exploring Minoan social structure, seems to have taken it for granted and it is extremely rare to find discussions on the basics of Minoan society – men, women and children – in his writings. Part of his reluctance to give more attention to social structure may result from the frustrating funerary evidence since this material does not allow an easy use for the reconstruction of society till the advanced Late Bronze Age and other direct means of access to social constructions of personal identity do not carry as much weight. This is unfortunate since an appreciation of the basics of Minoan society must form the starting point of any reconstruction of the way political power was exercised both at a local and regional level. The present paper advocates such a bottom-up approach by offering a first attempt at untangling the social role(s) of men, women and children in Minoan society. On the basis of archaeological and iconographical data, the importance of kinship, gender, age, status, class, ethnicity, locality, and religion as mechanisms for social grouping is considered in Minoan Crete.

Introduction

“But he who is unable to live in society, or who has no need because he is sufficient for himself, must be either a beast or a god: he is no part of a state. A social instinct is implanted in all men by nature.”

Aristotle, Politics, I.2.14

Following Aristotle’s “man is a political animal”, turned into “Homo sit naturaliter animal socialis” by Seneca, later used by Thomas Aquinas as “ homo est naturaliter politicus, id est, socialis” (man is by nature political, that is, social) and by Baruch Spinoza as “Man is by nature a social animal”, it is commonly accepted that we cannot live alone – we are doomed to form part of larger associations – we are neither gods, nor animals. The way we do this, however, differs from region to region and is subject to changes over time. “Agency: Peopling the Minoan World”, was the heading of a paragraph in John Bennet’s contribution to Labyrinth Revisited and it should still form one of the basic challenges in the future of Minoan research. In essence, this requires a discussion on social structure, the frame of persistent features and associations in which individuals or groups operate and which shapes their behaviour – the backbone of every society. Social structure is in fact a patterned relationship that is independent of the individuals involved so the form or morphology of a society is, in its largest sense, the network of all person-to-person relations in society, or, in its smallest sense, the relations between the major groups in society (those with a high degree of persistence).

Humans create and maintain different ways of socializing, of being part of larger associations – we are neither gods, nor animals. The way we do this, however, differs from region to region and is subject to changes over time. “Agency: Peopling the Minoan World”, was the heading of a paragraph in John Bennet’s contribution to Labyrinth Revisited and it should still form one of the basic challenges in the future of Minoan research. In essence, this requires a discussion on social structure, the frame of persistent features and associations in which individuals or groups operate and which shapes their behaviour – the backbone of every society. Social structure is in fact a patterned relationship that is independent of the individuals involved so the form or morphology of a society is, in its largest sense, the network of all person-to-person relations in society, or, in its smallest sense, the relations between the major groups in society (those with a high degree of persistence). Humans create and maintain different ways of socializing, of being part of larger associations, the scale of which can vary. All real groups or collective bonding processes need some way of self-categorisation (perceptions, identity-announcements and speech acts). Self-categorisation is an individual act that generates group categorization but leads to depersonalization in the way that it transforms the identity of the individual: individual subjectivities become social objectivities and result in fractal personhood. Individuals identify with, and behave as part of, social groups and it is this which provides them with a social identity. The basis of this identification is formed by the interaction of several parameters or types of identities, especially kinship, gender, age, status, class, locality, ethnicity and religion. Most people have multiple identities and belong to different groupings but some are more significant than others and membership in certain groupings is more likely to be advertised. This paper wants to explore what archaeological evidence exists for such advertised social identities.
and to what degree these various identities coalesced to constitute meaningful social identity markers and grouping mechanisms. Differences in scale, changes through time and regional variation receive little attention here but should be incorporated in future analyses if a meaningful reconstruction of community organisation is looked for.

Earlier Research

Evans, rather than exploring Minoan social structure,7 seems to have taken it for granted and it is extremely rare to find discussions on the basic actors of Minoan society – men, women and children – in his writings. Enough has been written about the Victorian milieu in which Evans grew up and contextualised some of his discoveries. When he writes about social structure almost flippantly, it is about a King and Queen, an elite and commoners, and often it is more the result of educated guesswork than interpretations substantiated by sound archaeological evidence and made within some anthropological frame. Still, where social structure is concerned, it is revealing that, from the first days of excavations at Knossos, the building was interpreted as a palace and its occupants as kings and queens, an interpretation reinforced by the discovery of a fine throne during the first season. Kings needed counsellors and the presence of a throne accompanied by benches provided a setting. From the beginning, relying on iconographical data, a court elite was reconstructed, consisting of men, women and children. Some later, historically Greek elements were introduced when, during the second campaign of 1901, the West Court was excavated which was seen as the agora serving as the meeting place for the citizens of Knossos. The same year the king of Knossos received an identity when the lily crown was found8 but afterwards he was given more oriental traits and from 1903 onwards he was called a Priest King9 and received a (reconstructed) face. In general, Evans used good sense and his remarkable intuition when ascribing areas within the palace to specific categories of people: seclusion and loom weights indicated women’s quarters,10 large quantities of rustic pottery suggested the presence of “handicraftsmen, and perhaps of slaves, living within the Palace walls”,11 fine mansions close to the palace suggested a palace elite.

After Evans, only a few scholars expressed interest in Minoan society. Glotz, for example, assumed that the size of large Prepalatial residential structures suggested the existence of a genos which later, in Neopalatial times, dissolved into nuclear families and the creation of kingship.12 In general, however, social structure receives very little attention before the publication of the 1981 Cambridge conference on “Minoan Society”, in which attempts at a more detailed understanding are formulated.13 Part of the reluctance to give it more attention undoubtedly resulted

7 Important studies dealing with social organization and structure in anthropology are Firth (1951), Radcliffe-Brown (1952) and LéviStrauss (1953). I prefer to use the term social structure rather than social organisation because I am especially interested in identifying the set of social relations which could have linked the individuals in Minoan society.

8 Evans 1901, 15: “in this crowned head we see before us a Mycenaean King”.

9 Evans 1903, 38: “The existence of minor shrines such as that of the Double Axes in the North [sic]-East Quarter, the religious symbols found in the North-West Building, and the constant reference to religious themes traceable in the seal-types, miniature paintings, and terracotta models, as well as the votive double axes and other objects found within the Palace, make it more and more probable that there was a sacerdotal as well as a royal side to the Minôan dynasts of Knossos. It would seem that there were here, as in early Anatolia, Priest-Kings …” and in the same report “we have here to do with rulers who performed priestly as well as religious functions” (Evans 1903, 148). Following this, the lily-crowned head was restored as a Priest-King (Evans 1904, 2, 43).

10 When further examining the rooms west of the Throne Room, Evans assumed he had found “the Women’s Quarter of the Palace. These rooms are entirely separated from those of the Throne Room system proper, or the Megaron of the Jewel Fresco which overlooked it. They form one long ‘apartment’, the single entrance to which is supplied by the door opening on to the ‘Room of the Lady’s Seat’ from the ‘Corridor of the Stone Basin’” (Evans 1901, 34). Elsewhere, the discovery of clay loom weights was a sign for identifying the rooms as “women’s chambers” (Evans 1902, 94).

11 Evans 1901, 75. When discovering both rich and humble looking finds in the North-East Magazines, Evans was slightly puzzled: “The one deposit speaks of wealth and luxury, the other connects itself with the needs of a quite lowly condition. We know, besides, what magnificent painted ware was at this time in use among the Knoonian lords. It looks as if these stores of rustic vessels, representing the survival of the indigenous potters’ style, were kept to supply the wants of a numerous colony of handicraftsmen, and perhaps of slaves, living within the Palace walls. Whatever new elements may have intruded themselves among the dominant caste, these humbler denizens, as the traditional types of their pottery show, belonged to the old Eteocretan stock” (Evans 1901, 75). Evans was indeed convinced that “companies of skilled craftsmen and artists lived and worked within the Palace walls” (Evans 1901, 92) and even that “[c]hildren were taught within the walls, and apprentices instructed in the arts and mysteries of their craft. The abundance of ‘rustic’ pottery has already been referred to as an indication that colonies of slaves or artisans of humble condition were domiciled inside the building. The Palace of Knossos, like the great Indian Palaces at the present day, was a town in itself” (Evans 1901, 93). That slaves were used is also assumed when discussing the drainage system in the East Wing since “slave labour was probably available for clearing out the impurities from the passages during the dry season” (Evans 1902, 87). See also Evans 1902, 67 (“slaves or attendants”).

12 Glotz 1923, 88: “Quand le séparatisme familial l’emporte sur le collectivisme gentilice, l’individualisme n’est pas loin.” Interesting remarks on the role of women also throughout his Book 2, Chapter 1. See Rosof 1985, 15–119, for a summary.

from the frustrating funerary evidence since this material does not allow for an easy reconstruction of society till the advanced Late Bronze Age and other direct means of access to social constructions of personal or group identity do not carry as much weight. This is unfortunate since an appreciation of the basics of Minoan society must form the starting point and backbone of any reconstruction of the way political power was exercised both at a local and regional level. By focusing mostly on polities and territories, the primary units of society have been neglected. Our “obsession with formal political organization [happened] at the expense of formal or informal community self-regulation”.⁴ We have concentrated on palaces, elite buildings and shrines without really appreciating the building blocks of communities. We have been going wild on elites without trying to explain what, how and why some people were different. This seems a challenging prospect for Minoan archaeology of the 21st century.

Moreover, leaving aside a recent trend of scholarly interest in household analysis,⁵ it is particularly striking how little attention ordinary people have received in Aegean studies in contrast to elites. The implication, generally accepted but rarely underbuilt, is recognition of the existence of inequality in Minoan society. Inequality as much as equality is an idea and not necessarily a reality⁶ and both are matters of scale and it would be naïve to assume the absence of differences between humans. Inequality, however, is all too rapidly seen as resulting from descent or class differentiation and it is rarely asked whether other parameters such as age, sex, experience, religious affiliation, ethnicity, and priority of establishment or other status principles may have been influential. Moreover, persons have multiple identities and identities are fluid and contextual.⁷ Some differences are taken for granted, others may be variously appreciated. Some will not be shown overtly, others will be advertised and used as markers.⁸ Some will show up in material culture, others will not.

To understand Minoan society, it is important to detect what the basics were of personal or social identity and on which principles groups were formed, and this at different scales (micro, medium and macro). I first discuss these different principles or personal identities separately before attempting to see whether a major structuring mechanism existed. In small-scale societies, kinship relations are usually assumed to have been stronger whereas in large-scale, state-like societies, classes based on specialized functions and status differences are usually the rule.

The Ties That Bind…

Kinship

In many societies, kinship (relationships through blood and marriage) remains the major structuring element which defines the identity of the individual and forms the most basic principle of organizing individuals into social groups, roles, and categories.⁹ All societies construct their kinship systems and define social groups, roles and relationships on the basis of a bilateral network formed through combinations of marriage and parentage ties. In some societies, the extended bilateral network, termed a kindred, forms a recognized social group, as in the case of many early medieval cultures. In contemporary European cultures, bilateral kinship is dominant, but few recognizable groups are formed. In many non-Western societies, emphasis is placed on exclusive descent through male or female relatives as was also the case in ancient Israel and Rome. Nevertheless, these unilinear systems also recognize kinship relationships that are not incorporated into direct male and female lines. Two types of unilinear descent groups that are often encountered in both matrilineal and patrilineal systems are lineages (groups with a real common ancestor) and clans (groups with a mythical ancestor).

That ties between blood relatives and through marriage existed in the Minoan archaeological record has been taken for granted but is rarely substantiated by proper evidence.¹⁰ Indeed, it is only recently that different types of DNA analyses combined with strontium isotopes have helped to substantiate claims of nuclear exogamous, patrilocal families in Bronze Age Germany.¹¹ To be sure of parental affiliation, we need skeletal material to conduct DNA and detailed anthropological analyses similar to those that have been done on the shaft graves at Mycenae.¹²

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⁴ Osborne 2007, 145.
⁵ Allison 1999; Souvatzi 2008; Glowacki and Vogeikoff 2011.
⁶ Osborne 2007.
⁷ Fowler 2004.
⁸ See Meyer 2007.
¹⁰ Haggis 1999, 68; Varto 2009, 164.
¹¹ Haak et al. 2008.
Although there is some evidence for kinship relations within funerary environments from Vronda and post-Minoan Eleutherna, and the presence of a male and a female in LM III tombs is assumed to reflect a (married?) couple, many other situations occur. Affinal relations – meaning those that are not based on blood links such as those implied by a reproductive unit – cannot yet be detected, but there is also surprisingly little hard evidence for kinship based on blood links from funerary contexts for Prepalatial to Neopalatial Crete. McGeorge mentions the discovery of some women with unborn foetuses and there is a recent example at Sissi of a Prepalatial house tomb in which the bodies of two children were deposited one soon after the other and both with the same dental anomaly as to suggest that they were related but this seems to be as far as the evidence goes for the moment: there is as yet no hard data from properly published assemblages such as those from Moni Odigitria, Hagios Charalambos and Archanes nor do preliminary studies on Knossian Middle Bronze Age burials suggest clear kinship relations. The normal communal tombs in which the skeletal material of individuals of different ages and sexes is found mixed are often interpreted as representing “families” or primary social units but to use proximate funerary deposition to claim kinship relations is more of an anachronistic assumption rather than an archaeological fact. Moreover, funerary evidence can be biased and directed by certain parameters that may not always be easy to identify. Kinship may have been a cultural construct with new members being adopted into the group on the basis of certain rules that may not show up through regular anthropological studies.

The best we can do then is to look for the reflection of primary social units outside of the funerary domain and it is here that the economic reflection of a basic social unit, the household, has become increasingly important in our studies. We should stress, however, that, although overlapping, families and households are different social phenomena. We can examine the physical structure or residence occupied by a group of people and see whether one or more households are attested and then deduce that such a household was formed by a nuclear or extended family comprising varying configurations of affinals and consanguinals as well as, sometimes, unrelated servants or sojourners. Not an easy exercise but unfortunately one of our key options to approach social structure. Different interpretations of the primary social unit on Minoan Crete have been presented: Whitelaw has argued for the existence of the nuclear family as basic social component whereas I have proposed an alternative hypothesis of larger, matrilineally organised house groups as elementary unit, without, however, discounting the dissolution of less successful houses into nuclear families. Such house groups can be compared to the oikos of Homeric society, in which consanguineal, affinal, and non-kin components formed a single corporate body.

At first glance, Minoan iconography does not seem to represent a useful source where kinship is concerned. Iconography is, per definition, something which should be placed in a restricted atmosphere related to a power structure which may be exclusionary and idealising. Hence, as a medium it may be extremely biased, only expressing concerns that are of interest to a particular segment of the population and entirely or largely omitting other segments. Only that what was ideologically important may find a reflection in iconography. The rarity of pure ruler iconography is a case in point and the absence of obvious family relations from iconography may underline that descent did not play a role in power transmittance. It may be telling that our most intimate Aegean representation – an ivory group from Mycenae shows two women and a female child (and not a boy, as Rehak has shown since small boys are always nude…) – matrilinearity exposed! Depictions of what may be interpreted as nuclear families are, to my knowledge, absent. Whatever the precise basic social unit, certain distinctive local styles of decoration may correspond to attempts by restricted resident groups to distinguish themselves. Haggis, for example,

23 Liston 2007, 60 notes for Early Iron Age Kavousi Vronda that “analysis of cranial nonmetric traits suggests that there are concentrations of some traits in graves found within groups of houses sharing common walls”; Angelarakis 2010 notes Carabelli’s trait on the teeth of four skeletons found together at Eleutherna.
24 Hence the LM IIIA–B tombs at Mochlos, Soles 2008, 199. For LM III Armenoi, see McGeorge 1987.
25 R. Koehl discussed this in an unpublished paper (“A House is Not a Home: In Search of the Minoan Family,” Cross-cultural approaches to family and household structures in the ancient World, Institute for the Study of the Ancient World, NYU, May 9–11, 2008) and I thank him for the manuscript.
29 Nafplioti, this volume.
30 Isotope analyses can help to reconstruct the origins of some of the people (cf. Nafplioti 2008).
Jan Driessen has shown how the extreme stylistic variation between a large number of MM IB ware groups with visually distinctive attributes in the Lakkos at Petras (and perhaps in a deposit at Palaikastro) “suggested strongly horizontal variability; if taken as social messaging devices in original or final display and use contexts, the wares could reflect juxtaposition of users or groups of users of equal or contested rank in performative contexts”.

This is a promising way of looking at the evidence. The biased distribution of pottery styles within a settlement may imply the use of styles as specific social markers. Malia, Myrtos-Fournou Korifi and other extensively excavated settlements may provide interesting test cases. Relaki and Sbonias have used seal stone iconography in similar ways.

**Gender**

A second principle which could have been at the origin of specific social groupings is gender. With Risman I believe that gender in general is a structure deeply embedded at the individual, interactional, and institutional dimensions of society, as a basis for stratification not just in our personalitites, our cultural rules, or institutions but in all these, and in complicated ways. Gendered roles of production allow a better appreciation of households since task differentiation seems to have been the norm, or, as noted by Carole Meyer: “Even in the simplest societies, gender is a key factor in the allocation of subsistence tasks”. Still, gender exclusiveness (with one gender only doing one task) is rather rare – we have come a long way from seeing the “Man the hunter, Woman the gatherer” binary opposition.

Still, some tasks (such as vegetal food as opposed to meat production) seem to be a more exclusively female domain in the anthropological record. In gender studies, what are called maintenance activities (which include cooking and food processing, textile production, domestic ware and tools, management and maintenance of common spaces and caring and medical practices) are usually associated with women. This is a promising avenue for Minoan studies. Providing food must have endowed women with power which means that the social role of women cannot be underestimated. I would also add socialisation – the process of acquiring culture and the appropriated behaviour within a society – as a source of power. Socialization starts from infancy and is therefore usually done through women – mothers or grandmothers. Identifying gender roles in the Minoan archaeological (as opposed to iconographical) record is still a relatively undeveloped field (Katarina Kopaka, Anna-Lucia D’Agata).

Following up the potential existence of menstruation huts suggested by Kopaka (which are attested also in high class Egyptian residences as shown by Meskell), I have made an attempt to identify gendered ritual space in some Minoan residences for the 2009 Heidelberg workshop on Minoan realities but simple archaeological contextual analyses of closely monitored excavations such as that of Myrtos Fournou Korifi may be revealing.

Gender studies have been extremely popular where Minoan iconography is concerned. Nikolaidou gives a good overview of work before 2000, including writings foremost by Nanno Marinatos but also by Alexandra Alexandri, Dimitra Kokkinidou, Eva Pilali-Papasteriou, Louise Hitchcock, Paul Rehak, Benjamin Alberti, Barbara Olsen, Fritz Blakolmer and Katarina Kopaka and the newly published Aegaeum volume FYLO highlights some of the more recent work. Iconographical sources, at least for the Neopalatial period, suggest that gender was an important structuring mechanism: men and women acted together but separately on ritual occasions. Moreover, it has been stressed that “the emphasis in the Aegean is generally on the group, not the individual”. This is shown by the miniature frescoes of Knossos but also by Xeste 3 and other iconographical material. If both sexes are occurring together as on some seals, rings and now on the Mochlos box, their roles are different. Some iconographic codes such as colour, dress, jewellery and hair style hint at the importance of gender differentiation in Minoan society. Although Benjamin Alberti has expressed doubts on the use of colour as a reliable indicator of sex, arguing that it was “superseded at times by other, more compelling means of identification”, colour seems consistently to be

36 Haggis 2012.
38 Risman 2004, 432–33.
40 See Allen et al. 2011 for a recent discussion.
41 Monton-Subias and Sanchez-Romero 2008. I thank S. Lozano for this reference.
44 Driessen 2012.
45 Nikolaidou 2002.
46 Kopaka 2009b.
47 Rehak 1998, 191; cf. also Chapin 2011.
used to differentiate between the public roles of men and women.\textsuperscript{49} The white colour of some of the bull leapers and, more importantly, of the so-called Priest-King relief fresco (which, following Ellen Davis and Paul Rehak should rather be identified as a she),\textsuperscript{50} does not insinuate some kind of gender-blender but rather imply a particular message which we fail to understand. Colour may have actually been added to real people on occasion of certain ceremonies or to denote a certain status or physical condition.\textsuperscript{51} As shown by different authors, Minoan dress (together with hair style, jewellery, tattoos and other ways of body modification) was also used as an appropriate medium to communicate in a non-verbal way.\textsuperscript{52} Through ascribed meanings, it may be used to stress gender roles or differentiate within specific categories. The ambiguity of gender dressing has been noted, since although hidden, the phallic sheath or codpiece draws attention to the genitals and although dressed, the bare breasts do the same trick.\textsuperscript{53} In contrast to Alberti, I think that Mireille Lee is correct in assuming that this underlines that in real life gender differentiation was regarded as important and that this was perpetuated through figurative art. Elizabeth Barber, Mireille Lee, Paul Rehak and Angeliki Pilali-Papasteriou have all noted that female dress is much more elaborate than men’s clothes which allowed little variation.\textsuperscript{54} Gender was hence a social category that was maintained through dress.\textsuperscript{55} The implication is that it was used as a social message, probably reflecting different statuses amongst women. It comes as no surprise then that clothing (female dress, sacred knots etc.) also acts in its own right, in a ritual atmosphere. The fact is that women occupy prime positions in the Minoan ritual sphere and that, even if discussions continue on the recognition of a monotheistic/polytheistic religious system, a female deity probably constituted the supreme divinity in Minoan beliefs, at least during the Neopalatial period.

Where anthropological evidence and the evidence of the cemeteries are concerned, gender differentiation is only gradually being examined.\textsuperscript{56} Still, even if gender (and age as we will see below) played a role during life and even if we cannot be 100% certain that everybody in society had access to formal burial, the presence of men, women and children in demographically correct proportions within Pre- and Protopalatial tombs suggests that no strict gender and age differentiations were operational in the funerary domain, at least not in ways we are able to distinguish for the moment.\textsuperscript{57} It may be added, however, that both Sevi Triantaphyllou and Tina McGeorge have been surprised by the better dietary conditions of females in contrast to males in the cemeteries where such observations were possible (Moni Odigitria, Hagios Charalambos).\textsuperscript{58} As previously mentioned, social power related to food production may be an explanation for their better health but I like to think that my conjectured matrilineal organisation of Minoan house groups could also have played a role. More detailed studies are awaited to explore whether differing practices regulate the burial of men and women (e.g. orientation, position, container, offerings).

Age

A third principle which could have been imperative in personal and group identity definition is age and related issues such as birth order, reproductive and marital status.\textsuperscript{59} Anthropological parallels show that many societies knew social groups consisting of persons of the same or similar age, most often gender-specific. Such age sets form corporate groups of which the members cherish a common identity during a specific period of time. Together they pass through a series of maturity related tests, an instruction into the specific rules of society. Initiation rites form hence another way of socialisation. Uninitiated boys, as David Leitao argued for later Crete, were regarded as biologically female.\textsuperscript{60} This communal training often results in bonding and solidarity which is sometimes maintained even after the instruction period has been completed. Age sets evidently crisscross social groupings based on kinship and descent and can become strong corporate units with a strong collective identity. In several societies, the senior age group often has a judicial function. That age-groups or agelai existed on post-Minoan Crete has

\textsuperscript{49} Rehak 1998.
\textsuperscript{50} Davis 1995; Rehak 1998.
\textsuperscript{51} For the use of tattoos in the Aegean Bronze Age, see Hoffman 2002.
\textsuperscript{52} Lee 2000.
\textsuperscript{53} Lee 2000, 119.
\textsuperscript{54} Barber 1994; Rehak 1998; Pilali-Papasteriou 1998; Lee 2000.
\textsuperscript{55} Lee 2000, 119.
\textsuperscript{56} Driessen 2010a and 2012 for some suggestions.
\textsuperscript{57} Triantaphyllou 2010, 233, 236 notes equal access for both men and women to Tholos A and B at Moni Odigitria. This seems to be confirmed by the recent excavations of a Prepalatial and Protopalatial cemetery at Sissi.
\textsuperscript{58} McGeorge 1987; Triantaphyllou 2010.
\textsuperscript{59} Appleby 2010, 150.
\textsuperscript{60} Leitao 1995.
been underlined by Robert Koehl and is evident from e.g. the oath of the Drerian ephebes.\textsuperscript{61} Nanno Marinatos has recently underlined the role of Hermes and Aphrodite, as illustrated by the Syme sanctuary, as divinities surveying age grades and initiation whereas others have stressed the role of the old Cretan divinity Velchanos (syncretised with Zeus Kretagenes) in this regard.\textsuperscript{62} Competitions (agones) in athletics but also dance, singing and more dangerous activities were the tests that allowed passage from one stage to another.\textsuperscript{63}

In different papers, Paul Rehak has recognised such gendered activities distinguished by age in the Santorinini frescoes and he also studied morphological differences in body and hairstyles in Minoan iconography used to convey age-grades.\textsuperscript{64} Later iconographical devices such as beards and mantels to distinguish between young and adult men seem already to be used in Minoan iconography, as shown by the Harvester Vase from Hagia Triada and an object such as the Boxer rhyton from the same site may represent such initiation-related competitions.\textsuperscript{65}

Age-groups could eventually lead to group, communal or simultaneous marriage, at the end of the initiation period, of all or a selected number of the members of the age group. That something like this existed in Greece is only hinted at by certain myths (e.g. the 50 Danaids, the Brauron girls etc.)\textsuperscript{66} but it seems to have been a practice on post-Minoan Crete if we can believe the citation of Ephorus in Strabo (X, 4, 20 = 482 C).\textsuperscript{67} These ceremonies would include an official banquet as well as a simultaneous, arranged marriage and were called Theodaisia, “the god’s meal”. It is still a practice in certain countries. Would this be the message hidden behind one of the miniature frescoes of Knossos?

The question is how to identify age groups in the archaeological record. As far as funerary evidence is concerned, age grouping does not, at first glance, seem to have governed depositional practices (apart from perhaps the all-male presence in the later layers of the Myrtos-Pyrgos tomb), however, since the better excavated and published ensembles mix neonatal, infant and adult depositions of both sexes. But then age group tombs are perhaps not to be expected since, although potentially dangerous, the initiation rites may not have caused casualties. Still, the scarcity of subadults in Tholos B at Moni Odigitria may tentatively suggest limited or no access to burial.\textsuperscript{68} It may, in the future, also be interesting to detect absent ages from the tombs. If initiation meant acceptance into a coded society, the members may have received special treatment which we have thus far failed to identify. But this could simply take the form of a dagger for men, a larnax burial for women, or another coded object. Outside of the funerary domain, age groups are even harder to identify apart from some potential special spatial ritual arrangements that existed for their training or meeting such as e.g. the sanctuary at Syme and the sacred caves which could have served specific initiation rites. Palaces as such may also have served as special venues for initiated men and women only.

\section*{Status}

Among the other important principles that define one’s identity are status and class. I prefer to make a distinction since their identification in our sources is different and the social implications need to be underlined.

Status, the prestige attached to a person in society or the rank occupied within a group, denotes an attitude of superiority or inferiority (dominance vs subordination).\textsuperscript{69} Striving for status is a primary and universal human motive\textsuperscript{70} and it is evident that even in so-called peer or egalitarian groups, status remains an important facet of interpersonal relations. Status can play at every level and at every stage and crisscrosses other categorisations such as gender, sex, ethnicity, etc.

\begin{itemize}
\item \textsuperscript{61} Leitao 1995; Koehl 1986, also Koehl (n. 25).
\item \textsuperscript{62} Marinatos 2003; Capdeville 1995; Patuchowski 2005.
\item \textsuperscript{63} Marinatos 2003.
\item \textsuperscript{64} Rehak 1998. 2007.
\item \textsuperscript{65} Already Koehl (n. 25).
\item \textsuperscript{66} Dowden 1995, 55.
\item \textsuperscript{67} Patuchowski 2005, 29; Capdeville 1995, 207: “Chez eux, tous ceux qui sont sortis en même temps du troupeau des enfants sont tenus de se marier simultanément; ils n’émènent pas tout de suite chez eux les jeunes filles épousées, mais ils attendent qu’elles soient capables d’administrer les affaires de la maison.”
\item \textsuperscript{68} Triantaphylou 2010, 236.
\item \textsuperscript{69} Ames 2007.
\item \textsuperscript{70} Anderson et al. 2001 have stressed how “striving for status is a primary and universal human motive and even how in peer groups hierarchy exists. Status is a function of both the individual’s drive and ability to attain status in interpersonal settings and the congruence of the individual’s personal characteristics with the characteristics valued by the group. Status involves asymmetrical amounts of attention, such that those higher in the hierarchy receive more attention than those lower in the hierarchy; thus, higher status group members are more prominent, visible, and well-known and receive more scrutiny. Second, status involves differential amounts of respect and esteem; higher status members are more respected and held in higher regard. Third, status involves differential amounts of influence within the group; higher status members are allowed more control over group decisions and processes. Hence, we propose...
as kinship, age, gender and other differences. Higher status individuals and groups receive more attention and respect and have more influence on group decisions and actions. Such status can be ascribed and hence hereditary or achieved and be the result of a person’s or group’s actions. High status or prestige usually implies some means of enforcing compliance (tradition, ritual, force) but at the same time sublimating overt ways of implementing it. That status was achieved because of some individual’s qualities can be accepted without further consideration. The question whether a system of birth-ascribed ranking existed in Minoan society is as yet impossible to answer. Despite the common use of the term “elite” in many a publication,71 we are for the moment unable to identify a grouping mechanism based on descent in which people born into the same group felt different from people born into another group and advertised this overtly and even less whether this was at the basis of a more holistic system of social stratification. If it existed, it implies the existence of an intergenerational ideology based on a hierarchical social order which would find a correspondence in an internal division of Minoan society, of separate segments that were felt as such. Was descent important enough to guarantee that society was ruled in a fixed, determinate way? Since this seems absent from later Greece until an advanced stage of its history and status was especially achieved through self-proclamation and self-advertising, it seems anachronistic to look for clear separations in Minoan society.72 In any case, iconographical sources are bound to illustrate only those with higher social status, but other archaeological sources should be able to inform us about the entire spectrum. It is to be expected, however, that an interpenetration of status and kinship groups existed, together forming noble houses.

Before looking at our archaeological sources, we may briefly explore the value of the later Linear B tablets. Unfortunately, status is not a concern of the Mycenaean accountants to a point that Cynthia Shelmerdine in a recent review said “establishing … the social hierarchy … is a detective job”.73 Although we read about the wanakas, the lawagetas, the damos (as one of the main constituents) and the lawos (perhaps the male fighting folk),74 it is almost impossible to appreciate their status. The only hint at the possible existence of hereditary status (i.e. the existence of a possible aristocracy) is offered by the presence of patronymics, father’s names, attached to some of the warriors that form the E-QE-TA, perhaps a warrior class.75 The other titles are all carried by officials and administrators — they are class and not status distinctions — and we cannot determine whether these positions were ascribed or achieved. That they reflect a hierarchy is certain, however.76 Moreover, the adjective wanakatero clearly suggests a binary opposition between “things royal” and “things that were not” but this is the only term which has this suffix. Frankly, we cannot even be sure that the position of the “king” was hereditary since there is a possibility that it was a function that somebody fulfilled separate from his usual identity (e.g. ekhelaon at Pylus). The repetition of names carried by high officials throughout the Mycenaean archives could potentially also suggest the existence of a limited stock of names from which high status families chose their children’s names but even this is disputed. In the Homeric epics, several heroes are said to be from a “more kingly genos” than others and it seems clear that some gene are of higher status than others within the same community. Donlan has pointed out that the term genos should be seen as a descent construct, as a way to impress others with a genealogical recitation and does not really reflect a social group; it is a cultural category which denotes a kin-group, of which “most of its members are dead, and the handful of the living have no formal function”.77 He argued conclusively that noble ancestry was “essentially meaningless in a society that valued accomplishment over all else”. Later on, Theognis of Megara (550 BC) would use the opposition kakoi and agathoi (agathoi andres, also called esthloi in the same text) to distinguish between nobles and commons but a real birth-ascribed ranking system will remain difficult to identify.

With regard to the Minoan evidence, several scholars have reconstructed a birth-ascribed ranking system resembling that of chieftdoms especially on the basis of the intergenerational use of tombs and the differentiation in material culture between tombs of the same cemetery.78 Still, such reconstructions remain hypothetical partly because we remain ignorant on kinship systems. Moreover, the habitual Minoan funerary deposition systems and reburial practices leave a lot of room for alternative hypotheses: is each tomb really used by a specific, well-defined...
kin-group or are they simply used by the community at large? Does the attention given to specific skeletal remains on reburial and manipulation reflect on the status of the original deceased or is there some correcting mechanism in which the status after death was different? Rather than to the burial we should pay more attention to commemorative rituals and reburial ceremonies since, in an Aegean context, these are community related, probably incorporated into seasonal cultic activities, reflecting an important role for ancestors and their cult. The absence or scarcity of funerary evidence during the Neopalatial period – although usually interpreted as indicative of a redirection of investment into more secular or religious arenas – is, I think, to the contrary, suggestive of a more complex relation between people and their ancestors. Why otherwise undertake a major effort to hide the skeletal material? But where Pre- and Protopalatial tombs are concerned, the putative high status of some of the deceased should be properly inserted within a larger framework of social relations, taking into account all of the multiple social identities discussed. Certain individuals may have held considerable prestige because of their kinship group, age, gender-related experience or other aspect, without being politically active or possessing extraordinary economic resources, and deposited offerings should be examined for their symbolic rather than economic value. This remark also applies to the hypothetical hierarchical reconstructions based on differences in the MM IB ceramic material in Deposit A of Early Magazine A at Knossos. Macdonald and Knappett have reconstructed a four-tiered hierarchical order for at least a ceremony reflected by the material “and perhaps more generally for that part of Knossian society that had to do with the palace”.

Using changes in goblet typology and its disappearance, Macdonald reconstructs a social system: “By the end of MM IB, I think that a strict hierarchical social structure had already become established at Knossos, with a single person in charge”. That this material reflects status differences seems acceptable but associating a political dimension seems exaggerated since distinctions based on other social principles cannot be excluded (gender, age, ritual experience…). Rehak, for example, has studied differences between costumes and jewellery to convey status but within religious ceremonies and Pilali-Papasteriou examined how dress, hats and hairstyles were used for differentiation between Minoan ladies: “hats”, she says “are supposed to be appropriate to take on messages of social group affiliation, because of their great visibility”. She already asked “Could this distinction be related to the matrilineal system, or is it the result of incorporating women within a system in which social differentiation was based mainly on male status?”

This is not to deny the possibility that status differences may have carried political implications or impact on decision making but it needs a more appropriate intellectual framework, which is absent for the moment. An interesting case-study is represented by the warrior burials of LM II–III A1 Knossos where Imma Kilian Dirlmeier convincingly recognised status differences through differing jewellery and weaponry depositions.

### Class

Following Marx and Weber, we may call a class a group of people who have similar economic circumstances that set them apart from people who have different conditions, whereas status, as we have seen, denotes an attitude of superiority or inferiority. Class should therefore primarily be used as distinctive for a hierarchical occupational differentiation with economic repercussions and impact on political decision making. Indeed, wealth and power are considered as most important variables of high (status) classes. Still, one can belong to a lower class but have high status and vice versa, belong to a higher class but have low status. The higher the class of an individual or group, the more impressive will be his or its authority, influence and ability to manipulate political and economic institutions. Again, the Linear B tablets suggest large groups of occupational differentiations – we may perhaps even speak of guilds in some cases – but all classes are treated in such an impersonal way that it is very hard to reconstruct a hierarchy apart from subjective deductions based on some contextual associations: textile workers,

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79 Driessen 2010a.
80 For a first attempt, see Legarra Herrero 2004.
82 Macdonald 2010, 205.
84 Rehak 1998.
85 Pilali-Papasteriou 1989, 98.
86 Pilali-Papasteriou 1989, 100.
87 Pilali-Papasteriou 1989, 100.
89 Smith 1984.
90 Bavin 1989.
shepherds, and artisans should be lower class, warriors, priests and landowners should be higher class. Whether we should reconstruct a vertical hierarchy or rather a more horizontally developed system is not immediately clear from the textual evidence, however.

For LM I Crete, Soles has reconstructed three classes: a large agricultural class, a military caste and what he calls a managerial class. Somehow this seems too anachronistic and reminiscent of Solon’s Athenian reform when he installed the four classes of pentakosiomedimnoi, hippēs, zeugeis and thetes. Pharaonic Egypt, despite its hierarchical structure, never developed a proper class system. A Ramesside (20th dynasty) papyrus informs us that Maiunehes, a village in Medinet Habu, counted 155 householders amongst which eight categories can be distinguished: 7 senior civil officials, 32 priests, 12 scribes, 12 “military”, 13 junior officials, 31 urban craftsmen, 47 with rural occupations and one without occupation. Servants or slaves do not receive special mention so they must have lived within the other households or formed some of these. Surprisingly the people who are not productive (officials, scribes, priests) are almost as numerous as those engaged in manufacture and agriculture (76:78).

Although a tendency of occupational clustering can probably be identified within the papyrus, no rigid segregation in status or class can be recognized – some priests are also artisans, for example. Even at Amarna it is difficult to recognize occupational clustering within the town, all artisanal activities are mixed and rich dwellings side poorer ones. John McEnroe classified Minoan Neopalatial residential structures on the basis of a series of architectural features into three types. Although not explicitly stated, these types may be seen as reflecting three social categories, but should we immediately see these categories as simply class-related and reflective of power and wealth? Or could these types reflect different types of social units such as matrilineal house groups as opposed to nuclear families whereby the first, for the fulfilment of certain needs (ceremonies), demanded larger and more elaborate structures?

A social category that is, for the moment, entirely invisible from our archaeological sources are those which are usually called marginalised social groups, slaves, outcasts, serfs and nomads. From Near Eastern sources, we hear of the existence of male and female prisoners of war from the 3rd millennium BC onwards and war has always been the main source of cheap labour forces. It does not seem to be something that Minoans chose to represent in their art and in general extreme relations of inequality are absent from their iconography, which of course, does not mean that it did not exist since at least at the time of the Linear B tablets, we hear of the sale of some people called doelo and it is the combination of these two words which is highly suggestive to assume that slaves existed at least on LM III Crete, when there were also some “slaves of the god”. Still, it seems a relatively limited group and there is no mention of captive women at Knossos as there is later in Pylos.

Residence

A principle which undoubtedly mediated to define an individual or group’s identity is residence or locality. Indeed, for some this may replace other categorisations in terms of importance. At the micro scale, post-marital residence patterns (patrilocal, matrilocal, neolocal etc.) have serious consequences on the structure, size and nature of residential groups. At the medium scale, common residence either within a neighbourhood or village certainly installed specific ties between people hence forming real and/or imaginary communities. Intergenerational permanence of residences and settlements seems to suggest that this was very important. Why people settle together is, however, a question we will only be able to answer if we manage to understand the precise make-up of each community. I see two broad scenarios: the first starts off with the settling of an original social group, which we may perhaps call “sedimented settlements”, the second is formed by coalescence.

In the first scenario, a social group settles at a given vacant location because of various environmental conditions. We may also assume that these same conditions subsequently attracted other groups and that integration was facilitated partly by the knowledge that greater numbers could protect these environmental conditions (resources?) against others. Later social units gradually or massively join, either peacefully or aggressively, resulting in integration or displacement. This scenario allows for status differences between the original and the incoming groups.

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91 Soles 1999, pl. IVb.
93 McEnroe 1982.
94 Mendelsohn 1946.
95 Stone 1997, 16.
(though not always in favour of the former in cases of replacement). It may be added that matrilineal descent groups will pursue integration more easily and effectively since incoming males will be rapidly recruited. Initiation rites play an important role since it is through these that new members are accepted.

The second scenario sees various social units deciding to settle simultaneously in a new location and such communities have been called coalescent societies because they are formed by remnant or refugee groups which form new communities, often in new places. A recent paper by Stephen Kowalewski studies such communities in detail.98

It is not necessary to introduce a rigid binary opposition between these two systems of settlement but they allow a better understanding of social differentiation within a process of nucleation. Indeed, if a birth-ascribed ranking system eventually developed on Minoan or post-Minoan Crete or in some of its settlements, it was most likely the result of one social group being there first and the next being sedimented on to it (although the opposite could be true in case of population replacement).99 Acceptance within an existing community may have implied accepting the status differences that ensue from such integration. Coalescence as a joint decision to settle in a new spot appears then as a more egalitarian way of integration in which more or less equal social units cooperated. Vertical hierarchy may have existed especially within the social units but not between them. On Crete, both sedimented and coalescent systems were most likely operational resulting into different trajectories throughout the island with settlements where status differences were pronounced and advertised and other settlements where they were much more discrete and sublimated. The dynamic aspect of this system is that moments of great disruption throughout Minoan history could have had entirely opposite results: displacement of populations leading to coalescent settlements of a much more egalitarian character or to sedimented settlements with increased inequality. Sites which were continuously inhabited are therefore more prone to develop status differences than newly founded sites.

Other Identities

Kinship, gender, age, status, class and locality are obviously not the only social identity forming parameters and some that are here left aside may prove to be more important than the attention given to them in this paper. In recent times, for example, groups can also be formed on the basis of professions (vocation; guilds), political action (such as factions),100 or past experience. Religious identity, for example, has been shown to have been quite influential in the past and the present but remains at present an entirely unresearched field in Minoan studies.101 The ritual activities as reflected by cult depositions in a variety of contexts such as peak sanctuaries, caves, open-air sanctuaries or within settlements are usually regarded as representing different aspects of a single, barely developing cult. Whether this is the case or not, certain anomalous practices may be regarded as deviant practices or crisis or cargo cults.102 Ethnicity, also, remains an element which is in desperate need of attention where Minoan Crete (as opposed to Mycenaean Crete) is concerned. Ethnic difference becomes objectified in particular contexts, foremost in contexts of contestation or opposition. Certain elements of material culture may have been deliberately impregnated with meaning to maintain and advertise identity, and here regional (and local) pottery styles, script, administrative practices and especially funerary customs may be informative. Do house tombs identify other ethnic origins than circular tombs, for example? Can we speak of a single Minoan culture throughout the different phases of the Bronze Age or are distinct local trajectories more likely with a grouping mechanism based on ethnicity with ties between persons of the same group, defined against other groups by material culture and area inhabited?103

98 Kowalewski 2006, 117 gives the following characteristics: larger towns or villages; attraction of newcomers, resulting in multietnic, multilingual populations; movement to new places providing security and potential for sufficient production of food and other necessities; collective defence and fortification; intensification of local production and changes in the social means of production, placing new demands on labour, particularly that of women; intensification of trade; elaborate community integration by means of corporate kin groups, including greater emphasis on moieties, unilineal (often matrilineal) descent groups, clan systems; sodalities; rituals of intensification; sports events; domestic architecture and village layout designed to promote community integration; egalitarian, collective, universalizing ideologies and cults; migration myths emphasizing incorporation and ordering of groups; collective leadership, including councils, council houses, confederacies; personalized leadership and centralized, hierarchical authority are played down; macroregional cultural basis of coalescence and political-economic context.
99 Smith 1984, 474.
100 Hamilakis 2002; Wright 2004.
103 Legarra Herrero 2009.
Both the Knossos, Akrotiri and Pylian frescoes distinguish between “us” and “them” as illustrated by the fresco of the Blacks, the Flotilla fresco with drowning enemy and the battle of Mycenaean warriors against those that wear skins.\textsuperscript{104} That different ethnic and cultural groups seemed to have co-existed on the island already during the earlier phases of the Bronze Age is not a new suggestion, especially where off-island populations are concerned but it still needs more proper attention and local trajectories represent evidently yet another challenge for research.\textsuperscript{105}

\textbf{Minoan Identity}

In conclusion, it seems evident that certain differences in material culture within or between settlements are reflections of social differences. We must continuously ask which of the principles here discussed is primarily responsible for these differences. Extraordinary material culture either in the funerary or residential domain has, I think, too rapidly been linked to economic factors only, whereas kinship, gender, age or ritual experience may have played a more prominent role in advertising social status. As much as social structure shapes individuals, individuals shape social structure. The reflection through material culture of the multiple identities is on the one hand our window to understanding what these identities may have been or how they may have been grouped or interacted; but on the other hand that reflection in material culture was itself obviously part of the creation and continuation of the identities and their interaction. I would suggest that kinship associations in which gender differentiation combined with age and a strong sense of locality shaped Minoan identity.

\textsuperscript{104} Davis and Bennet 1999, 111–12.
\textsuperscript{105} Soles 2008, 198; Legarra Herrero 2009, 31; Schlager 2011.
Bibliography


Jan Driessen


All Aboard: The Longboat and a Heterarchical Interpretation of the Mochlos Cemetery*

Steven T. Karacic

Studies of Prepalatial society on Crete have changed in the past 30 years, with the focus shifting from hierarchical to heterarchical forms of social organization. While these recent approaches have altered the understanding of several sites, the hierarchical interpretation of the Mochlos community has gone largely unchallenged. A re-examination of the evidence and theory for this interpretation suggests that the Mochlos community may not have been as hierarchically stratified as has previously been argued.

Reanalysis of the data, focusing on grave goods and their role in the funerary ritual, provides an alternative to the hierarchical model. This different approach suggests the community consisted of a number of households who sent trading expeditions to other parts of the Aegean. In order to support these voyages, the households needed to maintain networks of debt. Deaths upset these networks, and funerary rituals provided a means of re-establishing the balance of debts. The deposition of off-island goods during the funerary ritual was one means of realigning and manipulating debt. The recovery of these goods from the better preserved tombs argues for horizontal, rather than vertical, relations between the households. Such a heterarchical organization may reflect the technology employed to acquire these goods: the longboat. The labour demand of this vessel granted many households access to imported materials, reinforcing heterarchical social structures.

Introduction

Since its discovery, many scholars have recognized the Prepalatial community of Mochlos as having been a ranked society. In particular, Jeffrey Soles, the current director of excavations, interpreted Mochlos as the seat of a hierarchical society which laid the social foundation for the second millennium palaces of Crete. Such an interpretation developed within an academic tradition seeking the origins of the Middle Bronze Age palaces of Crete and, as a result, has overlooked the role of horizontal social structures. A review of the archaeological and theoretical foundations for the previous interpretations of Mochlos suggests that less differentiation between tombs existed than has previously been argued. This challenges the prominence of hierarchy in the reconstruction of the Mochlos community. A new interpretation of the evidence suggests horizontal social structures, specifically households, played the dominant role in the organization of the community.

The Archaeological and Historiographical Background

Seager first excavated Mochlos in 1908, and his work set the tone for interpreting the site. In two months of excavating, Seager exposed over twenty tombs as well as portions of an associated settlement (map 1). He published his research in a preliminary article in 1909, which focused on the settlement, and then he produced his monograph on the cemetery in 1912. In this later publication, Seager divided the cemetery into a western terrace and southern slope, following the contours of the site. He interpreted the western terrace as a royal burial ground used by the rulers of Mochlos while the southern slope was for the commoners. Seager operated within an academic milieu dominated by the work of Evans and ideas of colonialism and evolution. It was at Knossos where Evans discovered monumental architecture and evidence for extensive trade throughout the Eastern Mediterranean. Evans, in accordance with his Victorian background, interpreted his discoveries as a Minoan thalassocracy ruled by the elites inhabiting the palace of Knossos. As a way of

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3 Seager 1912, 11–3.

4 Evans 1921, 1–30; for discussion, see Hamilakis 2002.
dating his discoveries and synchronizing finds from other parts of the island, Evans and his assistant Mackenzie developed a tripartite chronological system dependent upon the stratigraphy of Knossos. These phases, the Early Minoan (EM), Middle Minoan (MM), and Late Minoan (LM), respectively corresponded with Evans’s evolutionary ideas of the rise, pinnacle, and decline of the palaces of Crete.

Evans’s work set two major precedents for the study of EM sites. First, the social institutions of the MM palaces gradually developed from EM society. Second, Crete was a homogenous civilization throughout the Bronze Age. In accordance with these beliefs, Seager interpreted the western terrace as early evidence for the Minoan royalty who later ruled from palaces like those found at Knossos and Phaistos.

These evolutionary ideas continued to shape the research of later generations of archaeologists, ultimately focusing most discussions of EM society on identifying the origins of MM social institutions. For example, scholars interpreted architectural remains from EM sites like Myrtos Fournou Koriphi and Vasiliki as forerunners to MM palaces and villas. Such an approach robbed EM material of its right to a particularistic interpretation.

In the 1980s, scholars challenged the evolutionary model. In his 1983 article, Cherry protested this model on the grounds that it lacked observable facts and explanatory power. In its place, he proposed a “quantum leap” of social complexity during EM III and MM I. According to Cherry, the palaces developed with the intensification of peer polity interaction and were not an inevitable result. Reinterpretations of the EM sites of Vasiliki and Myrtos Fournou Koriphi lent support to Cherry’s objections. This shift in scholarship called for understanding the Prepalatial period on its own terms.

It was within this academic environment that Soles and Davaras reexamined Seager’s work at Mochlos. They cleaned the cemetery during the summers of 1971, 1972, and 1976, identifying several new tombs and producing the first detailed architectural plans. Then in 1989 full scale excavation at Mochlos resumed. The new excavations focused primarily on later deposits; however, the team uncovered additional Prepalatial tombs and conducted three limited soundings into the EM settlement.

In conjunction with renewed archaeological activity at Mochlos and, at least partially, as a response to Cherry, Soles published his reconstruction of EM social complexity. He argued that hierarchical societies developed in EM II as a result of population movement throughout eastern Crete. The migrations required leaders capable

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5 Mackenzie 1903, 157–58.
7 Hamilakis 2002, 6; Legarra Herrero 2009, 29–32.
8 Seager 1912, 7–13.
10 Haggis 1999, 55.
11 Cherry 1983, 33.
12 Cherry 1983, 38.
of organizing and protecting their communities. Many of these individuals successfully manipulated ritual and ancestor worship in order to establish hereditary control, and it was the descendents of the EM II leaders who later ruled the MM IB palaces. According to this model, the embryonic stages of palatial social structure were present as early as EM II.

Much of Soles’s model for EM society depended upon his interpretation of the Mochlos cemetery. He correctly argued that tombs of the Prepalatial cemetery belonged to separate social groups within the community. There is debate over the biological relations of the members in these social groups, but it is likely that each unit was a household. In Soles’s reconstruction, the households burying their dead on the western terrace established hereditary dominance of the Mochlos community by EM II, and it was from these households that the MM IB rulers descended. Soles built this interpretation on the following archaeological evidence: the tombs of the western terrace were architecturally more elaborate than the rest, the distribution of artifacts indicated that the tombs of the western terrace had greater access to material wealth, and a strong positive correlation existed between the more architecturally elaborate tombs and wealthier burials. Soles filtered these interpretations through mortuary theory developed by the New Archaeology to conclude that the tombs of the western terrace belonged to the social elite who ruled Mochlos.

Since Soles’s reconstruction of EM society, new models for Prepalatial society have developed. Many of these have explored the potential of horizontal social structures and often have argued for a less hierarchically ranked society than that proposed by Soles. While these more recent models have shifted the discussion away from a focus on vertical social structures, most scholars still follow Soles’s interpretation of Mochlos as a hierarchical community. However, it is the intention of this paper to question the hierarchically focused interpretations of the Mochlos community and offer an alternative reconstruction.

**Objections to the Hierarchical Interpretation**

In the hierarchical interpretation of Mochlos, problems exist with both the analyses of the archaeological data and the use of theory. First, the differences in architectural elaboration are less pronounced than generally argued. Second, the distribution of grave goods seems to be a product of post-depositional processes. Third, no strong correlation can be proven between architectural elaboration and grave goods. Finally, the use of theory to reconstruct a hierarchical social organization is an oversimplification of the more nuanced mortuary data.

**Architectural Elaboration**

Crucial to the hierarchical model is the belief that the structures of the western terrace were more architecturally elaborate than those of the southern slope. It is argued that the two tombs of the western terrace were greater in size, used better building materials, and had an attached forecourt for the performance of exclusive rituals. However, a review of the available evidence suggests less difference between tombs than typically acknowledged.

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17 Soles 1988, 60–1.
19 Many prefer to view the household as a nuclear family (Whitelaw 1983, 2007; Soles 1992; Legarra Herrero 2014). However, Driessen (2010b, 2012) has recently challenged this assumption, suggesting the possibility of matrilineal and matrilocal kin groups constituting the household.
22 Branigan (1991), Mee (1993), Walberg (1993), TenWolde (1994), Manning (1994), and Colburn (2008) all follow the work of Soles in arguing for a hierarchical community at Prepalatial Mochlos. Whitelaw (1983, 2004) also interprets Mochlos as having a hierarchical social organization, but he builds his argument on population estimates (1983) and explores the possibility of horizontal social structures (2004). Watrous has published the only objection to Soles’s interpretation of the Mochlos cemetery. In a review of EM and MM Crete, Watrous questioned the unequal distribution of grave goods and differentiation in architectural elaboration. He also warned against inferring social rank from mortuary data (Watrous 1994, 713). However, Watrous later changed his opinion, arguing for EM II ranked societies in his 2001 addendum to his previous article (Watrous 2001, 221–23).
In his 1988 publication, Soles stated that the tombs of the western terrace were two to six times the size of the others. However, he did not calculate the areas of the tombs. By entering Soles’s architectural drawings into the ArcGIS program, it is possible to measure the areas of the tombs (table 1). The results indicate that the structures on the western terrace do not differ in a statistically verifiable way from those of the southern slope.

Soles arrived at his interpretation by reorganizing the tombs of the western terrace into complexes, but whatever principles he followed in his creation of these complexes he did not apply to the buildings of the southern slope. Soles combined Tombs I, II, III, IV, V, and VI into two structures he identified as Tomb Complexes I/II/III and IV/V/VI. Nowhere did he explain the reasoning for this merger, but it is likely that he did so because several of the compartments shared common walls and, in one case, an internal doorway.

Similar architectural arrangements are present on the southern slope but are never treated as complexes. Three groups of tombs from the southern slope share common walls and have internal means of communication: Tombs XX and XXI, Tombs XXIII and Alpha, and Tombs IX and X. In addition, Tombs XV, XVI, and XVII may form a cohesive structure; a party wall divides Tombs XVII and XV which is too poorly preserved to rule out the possibility of an internal doorway, and the walls separating Tomb XVI from Tomb XVII are built against one another, just like the walls between Tombs I and II.

If one accepts Soles’s Tomb Complexes I/II/III and IV/V/VI while overlooking the possibility of similar complexes on the southern slope, then the differences in area are statistically apparent (fig. 1a). Soles’s Tomb Complexes I/II/III and IV/V/VI respectively measure 33.08 m² and 18.89 m². A comparison of these measurements with the areas of the others demonstrates a disparity. The measures of unusualness for Tomb Complexes I/II/III and IV/V/VI indicate that both structures are far outliers. The only outlier in this set of data is Tomb Lambda, measuring 14.33 m².

However, if one combines all structural units that share a party wall and an internal doorway, a new set of data emerges. Under these criteria, the following are complexes: IV/VI, IX/X, XX/XXI, and XXIII/Alpha. After removing the level and spread from these measurements, no far outliers exist and the only outliers are Tomb III and Tomb Complex IX/X (fig. 1b). The other structures fall within 1.5 midspreads of the median value. According to this new set of data, the tombs of the western terrace are not significantly larger.

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Table 1: Area of tombs. All measurements were derived by scanning the architectural plans of the tombs into ArcGIS. Soles and Davaras (1992, fig. 4) published the plan for Tomb Lambda. Soles (1992) published the plans for the other tombs. In cases where a tomb had multiple rooms, the measurements for each room are provided.

<table>
<thead>
<tr>
<th>Tomb Number</th>
<th>Area (m²)</th>
<th>Tomb Number</th>
<th>Area (m²)</th>
<th>Tomb Number</th>
<th>Area (m²)</th>
</tr>
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<td>2,974</td>
<td>Beta</td>
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<td>6,506</td>
<td>Gamma</td>
<td>5,88</td>
</tr>
<tr>
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<td>XVII</td>
<td>3,174</td>
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</tr>
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<td>XIX.1</td>
<td>5,252</td>
<td>Delta.2</td>
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<td>Zeta</td>
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</tr>
<tr>
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<td>XX</td>
<td>3,383</td>
<td>Theta</td>
<td>5,887</td>
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<tr>
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<td>XXI</td>
<td>5,833</td>
<td>Iota</td>
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<td>XXII</td>
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<td>Lambda</td>
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<td>6,65</td>
<td>XXIII.2</td>
<td>5,434</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Soles 1988, 50.

Unusualness was preferred to the more commonly used z-score because it avoids the mean and standard deviation, which would frustrate attempts to locate outliers within the dataset. For a further discussion, see Drennan (2009).
Building Materials

It also has been suggested that the tombs of the western terrace employed more monumental building materials.\textsuperscript{29} The walls of Tombs I, II, IV, and VI included vertically oriented slabs, several of which measure over a meter in length.\textsuperscript{30} For these slabs, three different types of locally available rock were used: blue limestone, green schist, and purple schist.\textsuperscript{31} The large stones lined the face of rubble or stone walls and where multiple slabs stood in sequence the colors alternated. Such construction suggests a primarily aesthetic function for the stones and has been interpreted as a monumentalisation of the tombs on the western terrace.\textsuperscript{32}

However, such use of stone slabs was not unique to the western terrace. Soles published information for 19 built tombs on the southern slope of which nine preserved stone slabs.\textsuperscript{33} In these tombs, the size and quantity of the slabs are often comparable to the western terrace. For example, Tomb XVI preserved a number of slabs along the interiors of the western and eastern walls, and one stone measured 1.23 by 0.8 m.\textsuperscript{34} In addition, the poorly

\textsuperscript{29} Soles 1988, 50; Branigan 1991, 99; Colburn 2008, 212.
\textsuperscript{30} Soles does not publish the measurements for every slab. In his 1988 article, he remarks that slabs over 1 m in length are common along the western terrace (1988, 50). However he only publishes three slabs which surpass this benchmark. The measurements are as follows; Tomb I, westernmost stone in the southern wall: 1.10 by 0.23 by 0.90 m (1992, 42 n. 14), Tomb II, southernmost stone in the western wall: 1.98 by 0.28 by 1.26 m (1992, 43 n. 17), Tomb IV, largest stone in the western wall: 1.32 by 1.05 m (1992, 54 n. 32).
\textsuperscript{31} Soles 1992, 45–6.
\textsuperscript{33} The Tombs with slabs from the southern slope are IX/X, XIII, XVI, XIX, XX/XXI, XXIII/Alpha, Beta, Gamma, and Theta.
\textsuperscript{34} Soles does not count the total number of slabs in Tomb XVI. In fact, he did not uncover the northern wall of the tomb (1992, 88–9), but Seager (1912, 66–7) notes the continuation of slabs along this wall.
preserved Tomb XIII had a northern wall built of five vertical slabs lining the interior face. The stones alternated between limestone and schist to create what Soles called, "... an especially colorful combination". Such evidence suggests the use of uniform construction techniques throughout the cemetery.

Admittedly, the western terrace preserved a higher concentration of stone slabs; however post-depositional processes have greatly distorted the architectural evidence. Erosion has badly disturbed many of the tombs. In fact, the excavators of Mochlos have observed firsthand the destructive potential of erosion; following their initial excavations, Tombs I, XXIII, and Delta have all lost the remains of at least one wall.

Moreover, the preservation of walls suggests that erosion has had a greater impact on the tombs of the southern slope. The tombs of the western terrace are relatively well preserved; presently, only the west and north walls of Tomb III stand at less than a meter tall. In contrast, only 11 of the 44 measured walls from the southern slope have preserved heights equal to or greater than a meter. Of course, it could be argued that the walls of the southern slope eroded faster because of inferior building techniques. However, Soles considers the walls of Tomb V to be crudely built, and, despite its inferior construction, the northern wall stands 2.86 m. Therefore, preservation, and not restricted access to building materials, accounts for many of the differences between the walls of the western terrace and southern slope.

The Forecourt

Along the western terrace, Seager excavated and Davaras cleaned a forecourt which abuts the southern façade of Tomb Complex IV/VI. Soles interpreted the forecourt as evidence for ancestor worship which the ruling family of Mochlos employed as a strategy for legitimizing their hereditary power. While Soles is correct in identifying the forecourt as a ritual space where negotiations of social status occurred, too many uncertainties surround the date of its construction and the organization of the greater cemetery to confidently identify this feature as evidence for an EM II hierarchical society ruled by a single household.

Crucial to Soles’s interpretation is the dating of the forecourt to the EM II period, when he argued the elite families using the western terrace emerged as the rulers of Mochlos. Although often treated as a single unit, the forecourt consists of four separate architectural features: a step several meters south of Tomb Complex IV/VI, the lower pavement along the southern façade of the complex, the upper pavement on the eastern edge of the terrace, and an altar built on top of the upper pavement. The architectural sequence is straightforward: the upper pavement and altar must post-date the step and lower pavement. The section of the western terrace demonstrates the contemporaneity of the lower pavement and the tomb, dating this architectural phase to EM IIA. However, dates for the upper pavement and altar are less clear. Fragments of two stone vessels were found on top of the altar, possibly in situ, and date to MM I–II. The later date of the stone vessels has led Legarra Herrero to suggest an EM III–MM I date for the altar and upper pavement, synchronizing these features with similar constructions from Gournia Tomb II and the Myrtos Pyrgos tomb.

Soles also argued that the close association of the forecourt and the complex is indicative of a unique degree of ancestor worship, which the associated household employed as a means of legitimizing their hereditary authority. However, the southern terrace probably hosted similar rituals. Tomb Iota may preserve evidence of comparable ritual activity; a rectangular platform, possibly an altar, stands against the southern facade. In addition, excavations in 1989 uncovered two kernoi from the southern slope. Although the kernoi were not found in situ, they imply the presence of at least one more altar; in reference to kernoi from other Prepalatial cemeteries, Soles remarked, "... no kernos found in situ at any of the tombs stood apart from a built altar". The possible altar and kernoi from the southern slope suggest that formalized spaces for ancestor worship were not restricted to the western terrace.

36 Soles 1992, 43, 68, and 103.
40 Soles 1992, fig. 21.
42 Legarra Herrero 2014, 243.
44 Soles and Davaras 1992, 424.
Differential Access to Wealth

Scholars have also concluded that the tombs of the western terrace had greater access to wealth. Soles stated, “The concentration of wealth is particularly evident at ... Mochlos, where none of the burial deposits ... on the South Slope contains the same mass of wealth as that accumulated in the ... West Terrace tombs”.

The argument for higher concentrations of wealth in the tombs of the western terrace depends primarily upon two deposits in Tombs II and VI, which preserved more artefacts than any other tomb (fig. 2). However, it must be noted that several tombs on the southern slope contained as many or more artefacts than Tombs I, III, IV, and V. In fact, Tomb XIX preserved so many artefacts that Soles thought it may have “… belonged to a family related to the chiefly lineage”.

Alternatively, post-depositional processes may account for the relatively high concentrations of goods in Tomb XIX. Seager noted that crevices in the floor of Tomb XIX were full of gold foil. The same may be true for Tomb XXI, a second rich tomb on the southern slope, where Seager discovered the majority of the finds from a “… a crevice in the rock near the back of the tomb”. It may be the case that holes in the rocks saved the goods of Tombs XIX and XXI from erosional forces that may have stripped many of the other tombs of the southern slope.

Moreover, these same erosional forces appear to have had different impacts on the southern slope and western terrace. Legarra Herrero has called attention to the fact that some deposits on the western terrace were over a meter deeper than the southern slope. He argued that this may account for some of the variation in grave goods, and he considered over half of the tombs on the southern slope as too poorly preserved to be compared with the tombs of the western terrace.

Positive Correlation between Tomb Size and Wealth

It has also been argued that the larger tombs had more grave goods. Soles wrote, “There is a much greater concentration of wealth in the large tombs of Mochlos”. If this is the case, then it should be possible to demonstrate with statistics a strong positive correlation between tomb size and grave goods.

To test this, a Spearman’s rank test was run. This test evaluates the relationship between two variables according to rank rather than magnitude. If the rank-order for variable X, in this case tomb size, matches exactly with variable Y, here total grave goods, then there is a perfect positive correlation and the Spearman’s rank coefficient (rs) equals 1. In other words, rs = 1 if the largest tomb has the most grave goods, the second largest tomb has the second most grave goods, and so on. If, on the other hand, the smallest tombs have the most artefacts then rs will approach -1. Coefficients falling between -1 and 1 indicate varying strengths of either negative (-1 < rs < 0) or positive (0 < rs < 1) correlations. The closer the coefficient is to zero, the weaker the correlation.

47 Soles 1992, 257.
49 Seager 1912, 70.
50 Seager 1912, 76.
51 Legarra Herrero 2014, 221–22.
53 Soles 1988, 57.
All Aboard: The Longboat

Using the interiors of the tombs calculated with ArcGIS, it was possible to rank the tombs from largest to smallest (table 2). For those tombs that share a common wall and an internal doorway, the areas were combined and this was regarded as a single tomb. The largest tomb was assigned a rank of 28 and the smallest a rank of 1. The tomb with the most grave goods was assigned a rank of 28; the tomb with the second most grave goods was ranked 27; and so on. For tombs with the same number of grave goods, the average rank was taken. For example, Tombs V and III both had 11 grave goods and should be ordered 20 and 19, but since it is not possible to place one tomb ahead of the other in rank both are assigned 19.5.

When comparing the rank-order of tomb size to the rank-order of grave goods $rs = 0.3152$. This very weak positive correlation indicates that tomb size is not a reliable predictor for the number of grave goods.

<table>
<thead>
<tr>
<th>Tomb Number</th>
<th>Area (m²)</th>
<th>Grave Goods</th>
<th>X</th>
<th>Y</th>
<th>D</th>
<th>$d^2$</th>
<th>Tx</th>
<th>Tx ty</th>
<th>Ty</th>
</tr>
</thead>
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<td>23</td>
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<td>-5</td>
<td>25</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>IV/VI</td>
<td>12,607</td>
<td>64</td>
<td>24</td>
<td>27</td>
<td>-3</td>
<td>9</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>XIX.1</td>
<td>5,252</td>
<td>41</td>
<td>14</td>
<td>26</td>
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$Σd^2 = 2448.5$  
$ΣTx = 0$  
$ΣTy = 79$  
$Σx² = 1827$  
$Σy² = 1748$  
$rs = 0.3152$  
$t = 1.69354$

**Table 2** Spearman’s rank correlation test for tomb size and grave goods. This table only combines tombs if the chambers share a common wall and an internal doorway. The total number of grave goods for Tomb IV/VI includes the contents of a silver cup unearthed during the cleaning of the cemetery in 1971. It does not, however, include the objects discovered in the loose earth in the same season because these find cannot be confidently assigned to any single tomb (Davaras 1975, 101).
The New Archaeology

Soles built his reconstruction of the Mochlos community on mortuary theory developed by the New Archaeology. According to this theoretical movement, burials presented a means for reconstructing social organization. The concept of social persona, a fusion of social identities which an individual carried in life and the burying group reaffirmed after death, was essential to this school of thought.\textsuperscript{55} According to adherents of the New Archaeology, the social persona manifested in funerary rituals and varied with respect to an individual’s relative position within a society.\textsuperscript{56} To quantify the social persona, New Archaeologists employed a method called abstract energy expenditure. This theoretical system compared the resources devoted to different burials within a cemetery in order to rank them within a vertically stratified society. Thus, tombs demonstrating greater commitments of time, labor, and material resources had a higher level of energy expenditure which translated into a higher social status.\textsuperscript{57}

Soles followed the system established by the New Archaeology. He used his analyses of the archaeological data to build a case for greater energy expenditure among the tombs of the western terrace. He then argued that the deceased of the western terrace possessed a higher social status and reconstructed Mochlos as a hierarchical community.\textsuperscript{58}

Over the past three decades scholars have objected to the conflation of wealthy burials and high rank. Post-processualists rejected the idea of social persona and energy expenditure labeling them passive reflections of social status. Instead, they argued for the treatment of mortuary data as the archaeological traces of a ritual practice which actively defined, transformed, or terminated social relations.\textsuperscript{59} This more current development has shifted the focus of mortuary studies to the performance of burial and the opportunities for social realignment it presents.\textsuperscript{60}

A Reinterpretation of the Mochlos Cemetery

The analytical and theoretical flaws in the current interpretation of the Mochlos community necessitate a different reconstruction. A new interpretation, which prioritizes certain grave goods and their role in the funerary ritual, provides an alternative line of inquiry into the social structure of Prepalatial Mochlos.

The material remains from the tombs divide into local goods and those with off-island origins. The local goods include ceramics and stone bowls, both are products of Cretan origin. The off-island goods are any artifacts employing either a material or style of non-Cretan origin, including Cycladic style pottery, folded arm figurines, all metal goods, obsidian, and many types of semi-precious stones.\textsuperscript{61} While the local ceramics and stone bowls certainly held a role in the material culture of Mochlos, it is the off-island goods that provide the greatest insight into the social organization of the community.

The exact funerary ritual is impossible to reconstruct, but the available evidence suggests the ceremony involved the formalized consumption of off-island goods by all burying parties. As previously argued, post-depositional processes had an unequal impact on the recovery of off-island goods. As a result, the presence of these materials, as opposed to quantity, is the most accurate means of evaluating their distribution in the cemetery, and 21 of the 28 tombs contain at least one off-island artifact.\textsuperscript{62} At first, this ratio seems to argue against an even distribution, but the tombs without foreign materials are poorly preserved, incompletely excavated, or both. Tombs Beta, Delta, Epsilon, and Eta have no associated finds of any kind, certainly due to post-depositional processes. The only artifacts associated with Tomb Theta are a collection of sherds, but the partial erosion of the structure down the slope may account for its relative poverty.\textsuperscript{63} MM III activity disturbed Tombs XV and XVII, which would account

\textsuperscript{55} Parker Pearson 1999, 28.
\textsuperscript{56} Binford 1971, 20–9.
\textsuperscript{57} Tainter 1978, 128–36.
\textsuperscript{58} Soles 1988, 50.
\textsuperscript{59} Parker Pearson 1999, 84–94.
\textsuperscript{60} Keswani 2004, 8–9.
\textsuperscript{61} Legarra Herrero (2009, 44; 2014, 53) coined the term “off-island”. This is a far more versatile term than “exotica” which the original version of this paper employed and is the topic of an article by Colburn (2008).
\textsuperscript{62} The tombs with off-island goods are I, II, III, IV/VI, V, VII, IX/X, XI, XIII, XVI, XVIII, XIX.1, XIX.2, XX/XXI, XXII, XXIII/Alpha, Gamma, Iota, Kappa, Lambda, and Zeta. Legarra Herrero (2014, 222) uses the quantity of grave goods as a proxy for determining the best preserved tombs, and then compares the amounts of wealth from the tombs which he believes to be the best preserved. This approach has an inherent level of circularity that can be minimized by focusing on the presence or absence of goods.
\textsuperscript{63} Soles 1992, 110.
for the lack of off-island artifacts.\textsuperscript{64} In the case of Tomb VIII, neither Soles nor Seager excavated to bedrock, where finds of precious metals were most likely to be preserved.\textsuperscript{65} Therefore, the absence of imported materials from these tombs should be overlooked, and a pattern of universal access to off-island goods emerges.

Evidence suggests that voyagers traveled from the Mirabello Bay to the Cyclades in order to acquire off-island goods. The recent discovery on Thera of Vasiliki Ware supports the argument for contact between the Cyclades and the settlements of the Mirabello Bay.\textsuperscript{66} The presence of copper ore at Chrysokamino, a site only a few kilometers west of Mochlos, adds further to this picture; it suggests that the local metal industry had direct access to copper deposits in the Cyclades.\textsuperscript{67}

The community of Mochlos must have had a role in the trade between the Mirabello Bay and the Cyclades. Mochlos preserved the most pieces of Melian obsidian on Crete, and these deposits are the only ones known to include every stage of a lithics industry unique to eastern Crete. This indicates that traders from Mochlos had direct access to the obsidian in Melos, transported the raw materials back to the settlement, locally produced stone tools, and settlements as far as Myrtos Fournou Koríphi used these objects.\textsuperscript{68} Furthermore, excavations in the Prepalatial settlement of Mochlos uncovered multiple clay boats, which may hint at the importance of maritime activity to the community.\textsuperscript{69} Finally, Mochlos was situated on an excellent harborage at the mouth of the Mirabello Bay, conveniently located for monitoring all maritime traffic into or out of the region.

The longboat was the means for traveling to the Cyclades. By EM II, the longboat was the most technologically advanced sea craft in the Aegean, averaging 40 to 50 km a day.\textsuperscript{70} The currents imposed restrictions on the vessels, making it very difficult to row north from Crete but much easier to travel south from the islands of Melos and Thera.\textsuperscript{71} Therefore the crews most likely progressed from Mochlos east along the northern coast of Crete to Kasos and Karpathos before jumping to Anatolia. The longboats could then turn west to the Aegean islands before veering south to return with the current. This route would have required a crew to be absent for a minimum of several weeks.\textsuperscript{72}

Longboats demanded a steady supply of young men, and the most likely source must have been the household. The average longboat crew is estimated at 25 young men.\textsuperscript{73} Evidence from excavations and regional surveys suggests the household was the principle unit of organization in EM Crete, and in some instances they collected to form settlements.\textsuperscript{74} One way of providing a crew for a longboat, while minimizing the risk and cost of the voyage, would be for multiple households to contribute a rower or two. If the community of Mochlos followed this strategy, a single crew may have included representatives from as many as 25 households.

Long voyages would have placed stresses on the population. Not only is there always the risk of a ship being lost at sea, when coordinating optimal travel conditions and minimum durations for voyages with harvest and planting, it is clear that the crew must have missed important phases of the agricultural cycle.\textsuperscript{75} Even if we assume Mochlos only dispatched one longboat, numerous households would be missing laborers during crucial points of the agricultural cycle. Moreover, the absent members would have been the most physically hardy. Such a depletion of the labor pool would have made harvests and plantings more difficult.

The integration of households was a necessity for coping with this strain. Such integration is apparent on a regional scale; Haggis has demonstrated that clusters of small settlements in the Mirabello Bay shared resources through small-garden farming, pastoralism, and metallurgy.\textsuperscript{76} The households of Mochlos probably participated in a similar, if not the same, integrated network by acting as the seafarers for their regional system. Such a role is not novel; during EM I, the settlements of Pseira and Hagia Photia likely had a similar function for their respective networks in northern Crete.\textsuperscript{77}

\textsuperscript{64} Seager 1912, 66.
\textsuperscript{65} Soles 1992, 100.
\textsuperscript{66} Day et al. 2010, 216.
\textsuperscript{67} Betancourt 2006, 185; Broodbank 2000, 292–99.
\textsuperscript{68} Carter 2004, 293–98.
\textsuperscript{69} Seager 1909, 290; Broodbank 1989, n. 37.
\textsuperscript{70} Broodbank 2000, 258–60.
\textsuperscript{71} Broodbank 2000, 288.
\textsuperscript{72} Broodbank 1989, 333–34; 2000, 287–89.
\textsuperscript{73} Broodbank 2000, 287.
\textsuperscript{75} Broodbank 2000, 289.
\textsuperscript{76} Haggis 2002, 126–28.
\textsuperscript{77} Legarra Herrero 2009, 34–9.
The successful integration of the maritime households with the broader region required debt. The rowers could not farm while at sea and therefore their households depended upon others during certain periods of the agricultural cycle. In turn, the sedentary population had a demand for foreign goods, as the regional distributions of off-island goods attest.

Deaths threatened the balance of this debt. When one party in the agreement died, then the debts needed to be reordered. The funerary ritual offered an excellent means for the restructuring of debts. The entombing of off-island goods was one means of reaffirming the debt between the family of the deceased and its partners.

Within such an arena, considerable potential for social maneuvering existed. Ambitious individuals could have seized opportunities to expand their network of debtors or creditors through a manipulation of funerary offerings. Those individuals most capable of accumulating debt would have developed as leaders within the community.

But how successful were these ambitious individuals? At the heart of debt is surplus; the greater the available surplus the greater the potential for debt. The system on Mochlos involved the surplus of foreign goods. The accumulation of off-island goods depended upon naval technology, and the capacity of the longboat limited its acquisition. Such a trickle of commodities had the potential to dramatically increase the value of the imports. However, the labor demands of the longboats would have provided numerous households with access to off-island materials diffusing the valuables among much of the population. Such a distribution would have increased the wealth of the community in relation to outlying settlements, but would not have allowed for the monopolization of surplus by an ambitious individual. The archaeological correlates to this model are clear: Mochlos, as a community, preserved a much higher concentration of off-island goods than any other contemporary settlement, but individual differentiation within Mochlos is difficult to determine. There can be no doubt that leaders developed within the Mochlos community by skillfully spreading debt through funerary rituals and other less archaeologically identifiable means. However, naval technology set a limit on an individual’s ability to accumulate debt. Therefore a rigid, vertical hierarchy could not be established, and the community probably possessed a more heterarchical organization.

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Bibliography


Steven T. Karacic


All Aboard: The Longboat


Social Complexity and Gender Inequality in Prepalatial Crete

Maria Mina

This article explores the validity of models that explain gender asymmetries as an effect of growing social hierarchy in Prepalatial Crete. In order to disentangle the idea that gender inequalities constitute part of the path to social complexity, it is necessary to deconstruct unilinear models that credit escalating social hierarchy of Prepalatial society with the emergence of palaces. It is argued that social hierarchy is not an adequate gauge by which to measure social complexity or assess how social groups relate to one another. It is proposed instead that exploring the phenomena of heterarchy and homoarchy in prehistoric societies shifts our focus to social dynamics as indicators of social complexity. It is concluded that in the EM I and II phases it is possible to distinguish between cultural regions which were characterised by varying degrees of heterarchical traits that allowed gender groups to assume positions of status in relevant social contexts. Evidence for increasing homoarchy in the final Prepalatial period suggests that the rigid ways in which social relationships were structured would have restricted the negotiation of gender roles outside socially prescribed norms.

Introduction

Models of social complexity in Aegean prehistory have by and large proposed a progressive evolution towards “civilisation” with signs of growing social hierarchy and, naturally assumed, gender asymmetry. In order to refute the hypothesis that gender inequality is an inescapable condition of social complexity, we need to deconstruct and assess the models that conflate the two phenomena. Accepting the parallel progress between escalating social hierarchy and deepening gender inequality as a symptom of increasing social complexity presupposes validating the assumption that social complexity needs to be defined as a process of growing social hierarchy. If social hierarchy proves to be an inadequate measure by which social complexity can be detected archaeologically, or if it can be demonstrated that social hierarchy does not presuppose gender asymmetry, then we need to seek alternative ways of approaching the evidence. Studying the archaeological record in terms of heterarchical and/or homoarchical social organisation allows us to negate an a priori equation of social complexity with gender inequality and to identify complexity in non-hierarchical formations.

Social Complexity and Archaeology: An Evolutionary Affair

Although the term “evolution” originally referred to gradual development, evolutionary theory in the social sciences has been equated to unilinear progressive development. Evolutionism or evolutionary theory was introduced in the nineteenth century in analogy to Darwin’s general hypothesis of natural evolution, which Victorian scientists explained as a progressive path towards “civilisation”, synonymous to moral advancement. In archaeology, human societies advanced through the three age system and the successive stages of Service’s band, tribe, chiefdom and state. New Archaeology’s systems theory gave a fresh lease of life to orthogenetic models by proposing unilinear and functionalist approaches for the explanation of diachronical change. The assumption that societies’ increasing social complexity culminates in the emergence of states is still upheld in archaeology, though recent studies mark a departure from progressive models.

The entwining connection between unilinear social complexity and gender relationships in archaeology is traced back to the early evolutionary models. In 1859, Darwin’s Origin of Species proposed that biological evolution operated in relation to the principles of selection, variation and inheritance. For Darwin, however, selection

* I would like to thank the two anonymous reviewers for their constructive comments, which have benefited my paper, and the University of Heidelberg for their warm hospitality.

1 Scott 2005.
2 Darville 2006.
3 Crumley 2005, 40.
4 Bondarenko 2005, 18.
operated only on males, while females were compared to juveniles that lacked the ability of selection. McLennan in *Primitive Marriage* linked the shift from matriliny to patriliny to the eventual emergence of states. Morgan in *Ancient Society* and Engels in *The Origin of the Family, Private Property and the State* placed patriliny at a more advanced stage of civilisation than matriliny. The shift to patrilineal organisation was considered in nineteenth century models as a necessary development for the effective management of accumulated private property that in turn fostered the emergence of the state.

Unilinear evolutionary models promised to provide rational and neat explanations that would aid archaeologists to classify an otherwise “disorderly” archaeological record. In the 1980s, however, the deterministic biases of unilinear models were challenged for imposing a restricting view on society’s development through a series of stages, and for failing to explain why certain societies do not progress through the evolutionary ladder despite undergoing significant transformations. Scalar evolutionary models were further attacked for disregarding archaeological evidence and for failing to explain the non-conformity of observed patterns to preconceived stages of development. Men occupy a prime role in unilinear models as individuals of high status or as warriors, hunters or decision-making elders. Women’s roles, on the other hand, were acknowledged only in relation to men or through their natural attributes as wives, mothers or carers.

The link between social complexity and male dominance expressed through cultural evolutionary models also betrays the heavy influence of androcentric views. The hypothesis for women’s social subordination derived from ethnographic studies, since it was considered difficult to detect such patterns in the archaeological record. Furthermore, power differences between men and women were considered to be universal, and this phenomenon was conveniently associated with an assumed precondition of social hierarchy. The problems related to ethnographers’ attempts to report objective observations are widely recognised, and it is now known that societies studied by anthropologists had for a long time constituted part of the modern-day political/economic system which oppresses women.

In the 1970s, feminist anthropologists sought to understand women’s suppression by tracing inequality between men and women cross-culturally. In subsequent years, the universality of female subordination was challenged by means of references to societies that support gender equality or at least a flexible organisation of tasks between genders. In recent years, binary oppositions, such as culture/nature and public/private, are acknowledged as ethnocentric constructs, and the division between public/male and private/female domains is no longer considered applicable in non-capitalist societies.

Debates that have developed in recent decades in the field of gender archaeology have challenged long held views that men hold an exclusive association with advanced forms of technological production or that they are responsible for technological progress and thus “civilisation”. Moreover, predictive ethnographic models that propose universal models of gender labour division with men at the higher end of modes of production have been contested on two levels: (a) for the way they define the “producer” and (b) for adopting western ideas about the separation of labour into distinct spheres.

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5 Fedigan 1986, 28.
6 Kuper 1988, 60.
7 Kuper 1988, 71.
10 Gilchrist 1999, 32 (who cites Ortner and Whitehead 1981, 8).
13 Leacock 1978, 247.
14 Gilchrist 1999, 32.
Non-Linear Social Complexity

Social complexity in archaeology is defined by criteria of social hierarchy, itself a remnant of an evolutionist tradition in social sciences, according to which hierarchical formations ensured greater stability. In the last few decades, however, alternative approaches to social complexity have been explored in the social sciences, and developments in social complexity studies have pushed the agenda into new paths of inquiry.

In complexity studies, social complexity is not restricted to organised and hierarchical conditions, as suggested by social scientists; complexity can also occur in circumstances of chaos in an orderly and unpredictable way without necessarily posing a threat to stability. It is now accepted that chaos or surprise occurs even in highly hierarchical societies as a result of ineffective management of information and integration of other dimensions of power. Similarly, it is acknowledged that there are social or other structures which are not organised hierarchically, but whose parts are held together in an orderly and structured way. In fact, it has been argued that the prevailing idea in the social sciences that order correlates with hierarchy has inhibited researchers in their attempts to recognise patterns of behaviour that are complex, but not hierarchical.

The terms “heterarchy” and “homoarchy” serve to bridge the gap between the social sciences and complexity studies. Heterarchy constitutes both a structure and a condition, and infiltrated archaeology through the work of Carole Crumley who defined it as “the relation of elements to one another when they are unranked or when they possess the potential for being ranked in a number of different ways”. Heterarchy challenges the principles of systems theory which conflate hierarchy with order, and allows archaeologists to integrate agency in human history. In heterarchical forms of organisation the relative importance of the individual differs in accordance to the associated context and often conflicting values allow the continual re-ranking of criteria. Nevertheless, heterarchy is not the opposite of hierarchy, since even heterarchical societies can accommodate hierarchical formations.

Heterarchical societies promote individualism in the social arena, which is constructed in relation to personal honour and dignity; they allow a high degree of social mobility and demonstrate higher instances of achieved rather than ascribed statuses. As a general rule, societies that operate on the basis of direct inter-personal relationships, rather than formalised depersonalised ones, are often organised heterarchically. For example, societies of relatively egalitarian hunter-gatherers or tribal societies, in which socialisation operates in relation to the extended family, are not organised along heterarchical values. In heterarchical societies, decision-making also results from popular consensus, and tolerance of contrasting and distinct social groups promotes a better integrated community. As a result, power in heterarchical societies is inclusive, values are adaptable and there is a higher degree of group involvement, a point that is highly relevant for detecting gender parity and complementarity in prehistoric societies.

Homoarchy constitutes the counterpart of heterarchy. Bondarenko has defined it as “the relation of elements to one another when they are rigidly ranked one way only, and thus possess no (or only very limited) potential for being unranked or ranked in another or a number of different ways at least without cardinal reshaping of the whole socio-political order”. In a homoarchical society relationships are structured according to one governing hierarchical relationship (e.g. church, army), as opposed to heterarchical societies, and kinship ties play a much more important role in non-state homoarchic societies than they do in heterarchical societies of the same organisational

21 Crumley 2005, 41.
23 Crumley 2005, 42.
24 Crumley 1995, 2.
26 Bondarenko 2007a, 63–4.
28 Crumley 1995, 3.
29 Crumley 2005, 41.
31 Bondarenko 2007a, 68.
32 Bondarenko 2007a, 69; Crumley 2005, 44.
33 Bondarenko 2007a, 69.
34 Bondarenko 2007a, 69.
35 Crumley 2005, 43.
36 Crumley 2005, 44.
37 Bondarenko 2007a, 64.
In non-state societies, kinship may take an institutionalised form through conspicuous forms of cultural norms, myths and traditions that contribute to a society’s development into an early state. Non-kin based units, on the other hand, inhibit the development of state formations. In homoarchorical societies, it is possible that gender roles and behaviour may have conformed to the central governing principles, be it kinship or other, with limited opportunities for social or political negotiation.

We need to be careful not to equate homoarchy with hierarchy in the social sciences, or heterarchy with egalitarianism, as hierarchy can be present in all social formations. According to Bondarenko, homoarchorical and heterarchorical organisation is not tied to complexity levels and heterarchical and homoarchorical relationships can coexist in a society, thus posing a difficulty in our attempts to classify societies rigidly. For example, non-specialised hunter-gatherer societies can take a homoarchorical or heterarchical form. We should not assume, therefore, that heterarchical societies are inferior to homoarchorical ones, according to criteria of evolutionary models that classify societies in relation to political centralisation and social stratification.

Reading social hierarchy as a sign of social complexity can mislead archaeological research to paths of oversimplification. Alternatively, by exploring how social hierarchies relate to each other, i.e. in a heterarchical or homoarchorical way, we can place the analytical focus on the enactment of social dynamics and move away from static models. Although the social sciences and complexity studies remain divided on what constitutes social complexity, heterarchy and homoarchy go some way towards integrating hierarchical phenomena in the complex, flexible and unpredictable patterns of social dynamics. Furthermore, thinking in terms of how parts of society relate to each other allows archaeologists to consider the intersection of variables, such as gender, age, lineage, economic control, political authority or ritual influence.

Unilinear Approaches to Social Complexity and Gender in Early Minoan Archaeology

Explanatory models in Minoan archaeology are largely characterised by the retrospect way in which evidence has been approached: the emergence of palaces has served as a measure against which earlier developments corroborate an escalating process. Palaces have been interpreted as a natural consequence of a series of changes occurring during the Early Minoan (hereafter EM) to Middle Minoan (hereafter MM) transition: “The remarkable fact about the social and political organisation which emerged in MM I with the building of the palaces is that it was not brought about by revolution but by evolution”. Nevertheless, recent works demonstrate a general tendency to move away from unilinear approaches by exploring alternative scenarios for complexity in Aegean prehistory.

According to unilinear models, the economic and agricultural changes of the Final Neolithic–EM I period provided the conditions for the changes that ensued, and population growth around Knossos and Malia in the Late Neolithic–EM II period has been recognised as one of the first signs of change. It has been proposed that the increase of population levels above the range consistent with egalitarian social organisation is indicative of the shift towards social differentiation and consequently complexity. Moreover, it has been suggested that the increase of settlements and burial sites with evidence for social differentiation testifies to the increasing social complexity of Prepalatial society. Social asymmetry in Prepalatial societies, therefore, has been singled out as a sign of

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41 Bondarenko 2007b, 188.
42 Bondarenko 2005, 22.
43 Bondarenko 2007a, 65 (who cites Woodburn 1982).
45 Bondarenko 2007b, 188.
51 Manning 1994.
social complexity that brought about the subsequent emergence of palaces.\textsuperscript{55} It has been realised, however, that the limited evidence from excavated settlements, the largely disturbed contexts of burial evidence\textsuperscript{56} and the contested dating of the EM III phase significantly inhibit our understanding of Prepalatial developments.\textsuperscript{57}

Regarding gender, it has been proposed that the changes associated with the Early Bronze Age were supported by a shift from a matrilineal to patrilineal inheritance system, gender division of labour, monogamy and prohibited extramarital sex.\textsuperscript{58} In Minoan archaeology, the advent of the Bronze Age marked the decline of women’s economic role together with their restriction to the domestic sphere. Women’s contribution was recognised in association with the matrilineal organisation of society which regulated issues of inheritance and descent.\textsuperscript{59} In contrast, men were portrayed as actively engaging in the domains of production and public life.

Jan Driessen in a recent article proposes that Prepalatial and Protopalatial society were organised according to matrilineal principles.\textsuperscript{60} Support is provided by Peregrine’s hypothesis that matrilocal structures exceed 100 m\textsuperscript{2} with reference to Ember’s calculations, which resulted from Murdock’s Human Relations Area Files and the Ethnographic Atlas. In Peregrine’s analysis, however, the metric conversion of Ember’s threshold for inferring matrilocal from room suites is in fact 51.12 – 55.77 m\textsuperscript{2} and not 100 m\textsuperscript{2}.\textsuperscript{61} Moreover, according to Ember’s coding protocol “if the apparently average house contained more than one room or level, the areas thereof were summed … Storage and special cooking areas, if any, were not counted”.\textsuperscript{62} Driessen has not specified how the estimate for a household size consistent with matrilocal structures was calculated and whether it was based on total floor coverage. We know, for example, that the residential unit at Fournou Korifi included storage rooms and a detached kitchen space.\textsuperscript{63} If we exclude storage and special kitchen areas, therefore, as proposed by Ember for structures containing more than one room, we will most likely end up with a considerably smaller area, possibly below the threshold for matrilocal structures (51.12 – 55.77 m\textsuperscript{2}).

More importantly, objections raised by archaeologists have questioned our ability to define and calculate house-floor areas, as architectural remains are affected by factors such as multiple construction, reuse and remodelling, or the use of non-enclosed space as domestic living area, as in the case of rooftop space.\textsuperscript{64} Furthermore, anthropologists have challenged Murdock’s Human Relations Area Files and the Ethnographic Atlas upon which Ember and Peregrine based their analysis. Their data were collected in the years spanning 1890–1950 by different anthropologists, some of which were non-professionals.\textsuperscript{65} In the 60-year period, cultural traits would have changed among the recorded societies and societies that were recorded at a later stage had already been affected by their contact with Europeans.\textsuperscript{66} Other criticisms concern Murdock’s code formulation, as illustrated in the case of calculating subsistence of animal husbandry that he estimated on the weight of the food and not on its nutritional value.\textsuperscript{67} Another problematic area is the reliance on ethnographic analogues to deduce conclusions about past societies by ignoring other parallels\textsuperscript{68} and by disregarding the attested cultural diversity.\textsuperscript{69} Gender archaeology in recent years has exposed the dangers that lurk behind androcentric ethnographic models\textsuperscript{70} which assume universal patterns of labour division at the expense of women.\textsuperscript{71}

\textsuperscript{55} Day and Wilson 2002, 161.
\textsuperscript{56} Cherry 1983.
\textsuperscript{57} Watrous 2001, 159.
\textsuperscript{58} Sherratt 1981, 297–98.
\textsuperscript{59} Branigan 1988, 124–25.
\textsuperscript{60} Driessen 2012, 372.
\textsuperscript{61} Schillaci and Stojanowski 2002, 345.
\textsuperscript{63} Whitelaw 2007, 72.
\textsuperscript{64} Schillaci and Stojanowski 2002, 353.
\textsuperscript{65} Wotela and Moultrie 2008, 9–10.
\textsuperscript{66} Wotela and Moultrie 2008, 10.
\textsuperscript{67} Wotela and Moultrie 2008, 10 (who cite Pryor 2003).
\textsuperscript{68} Orme 1992, 27.
\textsuperscript{69} Gilchrist 1999, 39.
\textsuperscript{71} Rice 1991, 440; Wright 1991, 198.
Social Complexity as a Non-Linear Phenomenon

Orthogenetic approaches lump together variable and incomparable data in a quest to trace a single line of progress. It is widely accepted, however, that the archaeological record of EM Crete presents a picture of cultural heterogeneity, social fragmentation and diversity. Moreover, the emphasis placed on the detection of social inequality assumes erroneously that social hierarchy equals social complexity. This hypothesis results in archaeologists discounting non-hierarchical phenomena as signs of social complexity, while gender asymmetry is evoked as “proof” for social complexity. In the discussion that follows, it is proposed alternatively that approaching the Prepalatial archaeological record in terms of heterarchical and homoarchical criteria enables us to explore the full spectrum of social dynamics by examining the degree to which social groups were in a position to negotiate their status, irrespective of hierarchical phenomena.

Evidence for Heterarchy in Prepalatial Society

Archaeological case studies prove useful in demonstrating a range of variables that are consistent with heterarchical societies. In summary, heterarchical social organisation demonstrates the following traits:

1. Cultural pluralism, which is evident through site-to-site variability in material culture, differences in funerary rituals, differential participation in trade, localised cultural diversity and horizontal differentiation of community units.
2. An economy that relies on (a) household-based units of production, (b) economic specialisation of community parts, and (c) distribution of goods through competitive processes that is not controlled by a single centre maintaining a monopoly.
3. A system of social status attainment through personal achievement even where ascribed systems operate.
4. Resolution of conflict and political centralisation strategies that take the form of alliance formations which are open to periodic renegotiation. Archaeologically such patterns are consistent with limited evidence for organised violence of warfare.

How does the archaeological record of the Prepalatial period compare with the above criteria? In Crete, evidence indicates a contrast between communities with off-island affiliations and regions that followed mainly local traditions. In addition, diverging funerary practices across the island during the EM I and II phases suggest that Prepalatial society was not culturally uniform, and it is more appropriate therefore to treat communities living on Crete as culturally different groups that inhabited more or less distinct regions. In broad terms, it is possible to distinguish mainly between the region around the Asterousia mountains and the Mesara valley where tholos tombs concentrate, and the north coast which featured cemeteries with small cist or rock-cut tombs. Evidence for cave burials and rock shelter inhumations that maintained Neolithic burial customs can be found across the island, adding to the apparent heterogeneity of mortuary behaviour.

Differential funerary ritual, however, can also be detected on a regional level. Although such diversity has largely been interpreted as a sign of social hierarchy, it can be alternatively construed as evidence for cultural pluralism that characterises heterarchical societies. The north coast is characterised by cultural heterogeneity in the varying manner small cist or rock-cut tombs and their material assemblages conformed to Cycladic burial customs, as opposed to the area around the Asterousia mountains and Mesara valley that demonstrates homogeneous mortuary

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73 White 1995.
75 White 1995, 104.
76 White 1995, 104.
77 White 1995, 104.
78 White 1995, 105.
79 Branigan 1991, 103; Day et al. 2010, 214.
81 Doonan et al. 2007, 114; Legarra Herrero 2009, 31, 49.
82 Legarra Herrero 2009, 34–47.
83 Legarra Herrero 2009, 38.
behaviour for the greatest part of the EM I and II phases. The intersection of extra-insular influences with local traits on the north coast suggests the coexistence of communities which interacted regularly, but may have been organised differently. Cultural pluralism on the north coast is also evident through a heterarchy of values which is demonstrated by the various ways in which communities participated in exchange networks and integrated off-island material culture in their mortuary customs. The diversity of mortuary behaviour, especially evident on the central and eastern north coast and Archanes Fourni in EM II, is consistent, therefore, with a heterarchical social organisation that tolerated cultural diversity and fostered horizontal differentiation between members of closely interacting communities.

Cultural pluralism is also expressed in heterarchical societies through site-to-site variability of material culture and community-based economic specialisation, which is indicated by diverse patterns of production, circulation and consumption of pottery on a regional scale. On the north coast, the Kampos-related pottery found at Poros-Katsambas, which is made locally following a distinct ceramic tradition, is absent from nearby Knossos, and thus points to different consumption practices between the two communities during EM I. On the other hand, pottery of EM I Knossos linked to feasting and drinking ceremonies is lacking from the pottery assemblage of Poros-Katsambas. Regarding community-based economic specialisation, it is attested by evidence on the north coast at Poros-Katsambas by the amount of Melian obsidian recovered from EM I–IIA contexts. It is also possible that the same site undertook the re-packaging of the contents of the Cycladic-style transport vessels and their distribution inland. Another site that has yielded evidence for community-based economic specialisation on the north coast is Mochlos, finds from which attest to the production of stone vases, gold, silver and lead objects. The evident cultural and economic diversification between sites on the north coast is consistent, therefore, with heterarchical principles. The interdependence of sites on an economic level impacted on the relationships of community members by providing opportunities for the formation of supra-site alliances that allowed community members to negotiate their status in the economic arena according to heterarchical principles.

Decentralised craft-specialisation is another indicator for heterarchical organisation. On the north coast, evidence for household-level production (obsidian production at Malia, Knossos, and Poros-Katsambas) points to non-centralised organisation of production. Decentralised craft-specialisation is also indicated by evidence for metal-working that is attested at Malia, Knossos, Poros and Hagia Photia. The diffusion of metal-working practices on a regional level suggests the operation of multi-centred and competitive mechanisms for the distribution of finished products, which constitutes an additional expression of heterarchical social organisation. Decentralised craft-production is also evident in the Mesara area, where each site followed diverse methods of metalworking production with varying degrees of competence, as suggested by the diffusion of metallurgical manufacturing techniques. Furthermore, the absence of obvious standardisation in manufacturing techniques of arsenic bronzes indicates that metal objects were generally the products of occasional metalworkers. Similarly, potters probably worked full-time on occasions of production, but not all year round as suggested by evidence at Phaistos. Furthermore, EM pottery does not appear to have been centrally produced or distributed.

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86 Legarra Herrero 2009, 38, 39.
87 Legarra Herrero 2009, 39.
89 Legarra Herrero 2009, 39, 44.
90 White 1995, 104.
93 Dimopoulou 1997; Day et al. 1998.
96 White 1995.
100 Day et al. 1998.
102 Tselios 2009, 237.
103 Tselios 2009, 235.
105 Todaro 2009, 348.
106 Whitelaw 2004, 236.
Evidence for non-centralised organisation of production in areas in the north and south of the island, carried out at a household level by occasional craftspeople, has a number of implications for gender. The relationships of gender groups would have been founded on synergy and complementarity for the successful performance of economic tasks on a seasonal or regular basis. We should also avoid making assumptions regarding gender labour division by associating men with “male” tasks (e.g. metalworking) and women with “female” tasks (e.g. pottery). Such hypotheses, which still prevail in Aegean prehistory, have been influenced by ethnographic models that served to explain gender labour division as a universally predictable phenomenon.\(^ {107}\) Such predictive ethnographic models, however, are limiting on a number of grounds: their definition of the producer excludes women,\(^ {108}\) they adopt western ideas concerning the separation of labour into distinct spheres,\(^ {109}\) and capitalist theorisations of labour do not take into account the invisibility of certain women’s activities in terms of economic return or tangible material evidence.\(^ {110}\) It is essential to realise, therefore, that more than one gender was involved at different stages of the production process (from procurement of materials to the finished product),\(^ {111}\) which would be consistent with evidence for social heterarchy in Prepalatial Crete. Furthermore, the fact that tasks were carried out on household premises probably suggests that even children contributed to economic production alongside older family members.

On a different note, heterarchical societies allow social groups to forge lateral relationships and alliances that on Prepalatial Crete may be detected on an island level with implications for the micro-scale social organisation of individual communities. A lateral differentiation and a mutual economic dependency between communities belonging to different regions suggest that opportunities were open to horizontal differentiation of community members or community units\(^ {112}\) that would surpass the boundaries of the local group. Traces of reciprocity and interdependence on an economic level are attested by the movement of products between sites and regions, as indicated by ceramic imports from the Mesara in Knossos\(^ {113}\) and economic reciprocity between the Mesara and Gournia.\(^ {114}\) The formation of alliances is indicated further by the links that south-central communities maintained not only on a local scale, but also with the wider Aegean via Poros-Katsambas that constituted a node on the north-south route.\(^ {115}\)

A pluralistic expression of social roles with an emphasis on individualism is indicative of societies in which differentiation is constructed in a flexible way in a heterarchical context.\(^ {116}\) Although it is difficult to establish the concept of individualism in Prepalatial society, it may be sufficient at this stage to suggest that the variety of personal material culture (jewellery, hair and attire accessories, weapons and depilatory equipment)\(^ {117}\) indicates the emergence of marked social groups whose members established their distinct roles and status through practices such as combat, grooming, attire or adornment.\(^ {118}\) Moreover, the increased production of daggers in EM II and EM III\(^ {119}\) possibly implies attainment of achieved social status through acts of bravery and personal honour, which is consistent with heterarchical social norms.\(^ {120}\) The use of EM II seals also suggests a close association with the owner\(^ {121}\) and the highly individualistic decorative patterns within EM III seal groups\(^ {122}\) may have corresponded to differentiation between community members through the manipulation of material symbols. Given the limitations of the mortuary record of Prepalatial Crete, it is not possible to draw links between the use of material culture and sexed skeletons, which may or may not have correlated with gender groups. We need to refrain, therefore, from imposing modernist associations between genders and “male” (e.g. weapons) or “female” (e.g. jewellery) material culture, especially given the lack of supporting evidence.

\(^{107}\) Brown 1970.


\(^{109}\) Wright 1991, 195.

\(^{110}\) Rice 1991, 440.

\(^{111}\) Wright 1991, 195.

\(^{112}\) White 1995, 106.

\(^{113}\) Wilson and Day 1994.

\(^{114}\) Branigan 1991.

\(^{115}\) Dimopoulou 1997, 434.


\(^{117}\) Carter 1994.

\(^{118}\) Branigan 1999, 89; Nakou 1995, 23.

\(^{119}\) Stos-Gale 1993.

\(^{120}\) Cf. White 1995, 104.

\(^{121}\) Maggidis 1998.

\(^{122}\) Sbonias 1999, 36.
Finally, the relative endowment of burials also complies with heterarchical organisation. Although the funerary record of Prepalatial Crete does not preclude phenomena of social differentiation, the lack of evidence for social inequality from the Mesara tholoi suggests non-centralised control over access to material goods. Similarly, settlements across the island do not provide evidence for rigid social inequalities that would point to inflexible homoarchical organisation. Structures from Vasiliki and Fournou Korifi, once considered predecessors of palaces, have since been interpreted as unplanned clusters of structures belonging to different construction phases and of a different scale to those of palaces. Zois’ excavations at Vasiliki have not detected a single, large house, but several small ones, and evidence from Fournou Korifi does not point to narrow concentration of wealth. Other EM II sites where small houses have been unearthed include Knossos, Phaistos and Chania. Nevertheless, parallel homoarchical elements of social organisation appear to have operated at Knossos, Phaistos and Vasiliki, as indicated by the existence of open courts in EM IIB, which suggest control of participation by a certain social group.

Evidence for Homoarchy in Prepalatial Society

A different set of criteria apply for the detection of homoarchical organisation at an archaeological level, which are summarised as follows:

1. Kinship ties, biological or institutionalised, assume a prominent role in homoarchical social organisation as lineage or family bonds underpin social relationships and attribute ascribed status. Contrary to heterarchical organisation, homoarchy restricts the development of lateral relationships and inhibits flexible negotiations over social status.

2. In homoarchical societies decision-making does not result from community consensus, as opposed to heterarchical principles.

3. Homogeneity of social and ideological norms corresponds with homoarchical organisation.

4. Homoarchical societies exhibit a restricted spectrum for the articulation of social status, as opposed to the flexible construction of status in heterarchical societies evident archaeologically through the relative distribution of wealth.

Prepalatial communities demonstrate homoarchical traits as indicated by the presence of tholos and house tombs, implying that kinship ties held a prominent place. It is fair to say that we cannot draw secure conclusions about the criteria for inclusion in communal tombs, be it kinship or other. Nevertheless, the selection of certain individuals for inclusion in a tholos or house tomb suggests that social organisation may have operated on the basis of homoarchical principles along biological or social criteria that classified individuals in appropriate groups and legitimised social order through allusions to kinship.

The region around the Asterousia mountains and Mesara valley, where tholos tombs are concentrated, exhibits a strong homoarchical ethos in the EM I and II phases which are evident in mortuary behaviour. Tholos tombs in the Mesara appear to have had parallel use, accommodating members of one clan, equivalent to two to four nuclear families. House tombs, which are mainly a northeast phenomenon, may also be interpreted in homoarchical terms. Although they contained a much smaller social group than tholoi, they may be attributed nevertheless to

125 Warren 1972.
126 Cherry 1983.
127 Watrous 2001, 175.
128 White 1983.
129 Watrous 2001, 175.
130 For a discussion, see Driessen 2004, 80.
132 White 1995, 104.
135 Driessen 2010.
137 Branigan 1993, 95.
138 Soles 1992; Legarra Herrero 2009, 44.
a distinct social or cultural group that existed in the largely heterarchical context of the north coast. Moreover, the elaborate construction of house or tholos tombs in the northeast or in the south, the accompanying grave goods, as well as the performance of associated ceremonies indicate the local community’s concern to highlight and maintain links with the ancestral past. Evidence for repeated use and repair of the tholoi also demonstrates the intention of Mesara community members to preserve the memory of lineage descent, biological or institutionalised. In societies where lineage relations assume a prominent role, the ability of community members to negotiate their gender identity, roles and social status would have been significantly restricted. A child burial associated with prestige objects from Fourni may in fact represent an example of ascribed status according to homoarchical principles.

Homoarchy is further indicated by evidence that implies lack of community consensus and the exercise of aggression. Although warfare does not constitute a conspicuous feature of Prepalatial society, acts of violence can nevertheless be inferred from the presence of weapons, fortifications and episodes of destruction, especially in the later period. The production of daggers reached its peak in EM II and III, as indicated by metalworking evidence, and their use is attested outside the limits of the Mesara area. The extensive use of weapons in EM II and in the following phase suggests that the warrior ethos became a prominent part of social performance and was probably associated with acts of violence and bravery, although evidently not everyone would have been entitled to such status. Furthermore, the peak of dagger production coincides with the period when abandonment and destruction is attested at many sites across the island from EM IIB onwards. The fact that Fournou Korifi was not resettled after its destruction suggests that hostilities and competition continued in the later Prepalatial period. In addition, evidence for the occupation of large sites is very limited (Knossos and Malia) and smaller sites appear to have been abandoned. There is also a gap in occupation at Pyrgos-Myrtos between EM II and MM IA, and evidence for occupation at Phaistos and Kommos between EM III–MM IA is limited. Other sites may have been abandoned, as in the case of Palaikastro, and the countryside reveals similar patterns of desertion in EM III. Furthermore, many tombs demonstrate a parallel discontinuity in use. The disruption of contact between Knossos and the Mesara area, Crete and the mainland and the Cyclades, in addition to the lack of Near Eastern imports at Knossos, may be placed in the general context of upheaval in the final Prepalatial period.

Warfare may also be inferred from the limited evidence for fortifications. EM IIB Myrtos has produced evidence of an outer wall and a tower at its seaward entrance. At Hagia Photia, a MM IA–B multi-room building associated with a silo structure that was protected with a fortified wall was contemporaneous with the equally fortified site of Chamaizi. Fournou Korifi was enclosed by a perimeter wall, and the entrance to the south was fortified by bastions in the final period of occupation. Small MM IA settlements, the majority of which were new foundations, were also fortified and situated on defensible locations. Although the picture of the last Prepalatial phase could be elucidated by a better understanding of chronological and stylistic definitions, the evidence of the EM IIA–MM I period presents a picture of increasing social disruption, possibly corresponding to a growing importance of homoarchical principles.

141 Maggidis 1998, fig. 6.30, skull no. 174.
142 White 1995, 104.
143 Stos-Gale 1993.
145 Watrous 2001, 179.
146 Whitelaw 2007, 73.
147 Whitelaw 2004, 242–43.
148 Whitelaw 2007, 73.
149 Whitelaw 2007, 73.
155 Tsipopoulou 1999, 182.
156 Whitelaw 2007, 73.
Convergence of social and ideological norms, which characterises homoarchical societies,\textsuperscript{159} is suggested by the widespread use of pithos and larnax burials in EM III which replaced earlier funerary rites. The emergence of uniform social norms can be inferred further from the convergence of pottery styles of West Crete with pottery styles from the rest of the island in EM IIB, which indicates conformity of consumption practices.\textsuperscript{160}

The disparities in the final Prepalatial period between tombs in the building materials, quality of construction and energy expenditure indicate a narrow concentration of wealth on particular social group(s), which is consistent with inflexible negotiation of status. In the northeast, for example, small built tombs at Gournia North Cemetery contained grave goods much richer than the finds from Sphoungaras pithos burials.\textsuperscript{161} In the centre of the island, similar differences are detectable at the cemetery of Fourni at Archanes between the modest Burial Building 19 and the monumental complex of Tholos B, and between the burial grounds around Archanes and the main cemetery at Fourni.\textsuperscript{162}

Finally, evidence for the definite or possible use of open courts at a number of sites across the island in the late Prepalatial period (Knossos, Vasiliki, Malia, Phaistos)\textsuperscript{163} is also consistent with a growing importance of homoarchival principles. Although open courts served as gathering points for community members, the existence of a constructed access system suggests that participation in the performed rituals may have been controlled by a particular social group.\textsuperscript{164} The right to partake in ideologically charged events that unfolded in open court areas may have been granted to community members that shared a connecting bond, genealogical, spiritual or other, which held a structuring role in late Prepalatial society.

**Conclusion**

Archaeological evidence indicates that the organisation of Prepalatial society was characterised by diversity and fluctuation throughout the course of its history on a regional and temporal level. Although it has not been possible to fully discuss the implications in this article, the prominence of homoarchival principles in the final Prepalatial period may be responsible for the increasing political and economic centralisation in the MM period through the development of institutionalised kinship ties. Nevertheless, the oscillation presented by the archaeological record challenges orthogenetic evolutionary models which have interpreted social hierarchy as the sole indicator for complexity and the ensuing emergence of palaces.

In summary, Prepalatial society was characterised by heterarchical as well as homoarchical principles of organisation (fig. 1). On the basis of the available evidence, society in the EM I and II phases exhibits regionally elements of heterarchical organisation to varying degrees. The north coast and east Crete demonstrate a stronger heterarchical ethos than the south-central regions. The parallel existence of diverse mortuary practices, the heterarchy of the value system, the site-to-site variability in material culture, the community-based specialisation, de-centralised craft specialisation and evidence for distinct social roles suggest that horizontal differentiation was tolerated and encouraged. In the area around the Asterousia mountains and in the Mesara valley, heterarchy operated parallel to homoarchival principles, albeit at a lower level, as indicated by de-centralised craft specialisation, the attainment of social status and the relative endowment of burials. Community members of different regions, therefore, could maintain flexible relationships and could assume positions of varying status in appropriate contexts.

In a context of cultural and social pluralism, gender relations would have been dynamic and contested. Far from scenarios of gender inequality in which men are portrayed as holding dominant roles, we should envisage a picture in which gender roles were possibly differentiated, but at the same time complementary and perhaps interchangeable, as suggested by evidence for transient occupational status and economic interdependence. This would suggest that community members and social groups were able to negotiate their position through alliances combined with their active engagement in the social and economic arena. From a heterarchical context, gendered individuals were not subject to rigid socially prescribed norms, but were able to assume positions of social status according to relevant social contexts.

\textsuperscript{159} White 1995.
\textsuperscript{160} Day et al. 2010, 214.
\textsuperscript{161} Soles 1992, 2–3.
\textsuperscript{162} Maggidis 1998, 96–7.
\textsuperscript{163} Driessen 2010, 6–7 (with references).
\textsuperscript{164} Driessen 2010,12.
Heterarchy, however, did not operate singularly in Prepalatial societies. Emphasis on lineage bonds (biological or institutionalised) throughout the EM period suggests that kinship operated as a structural value that permeated all facets of social life, thus enforcing a homoarchical organisation. An element of homoarchical organisation is especially prominent in the south and centre of the island, where tholoi are concentrated, and less so on the north coast, in the west or east of the island. The homogeneity of cultural practices, evident in the uniform mortuary behaviour in the Asterousia and Mesara areas are further indicators of a prevalent homoarchical ethos throughout the Prepalatial period. Social groups that possibly embraced homoarchical principles may have also existed in the largely heterarchical context of the north coast, if inclusion in house tombs was subject to shared ancestry.

In the final Prepalatial period, and especially after EM IIB, evidence suggests a prevalence of homoarchical principles across the island. The production of daggers and evidence for abandonment and disruption are signs of friction, implying that decision-making was not entirely based on mutual agreement of all parts of a heterarchical society. Furthermore, the wide adoption of larnax and pithos burials evident in EM III and MM I throughout Crete suggests convergence of social norms and thus growing homoarchisation on an island scale. Finally, controlled access to open courts at a number of sites on Crete, as well as evidence for narrow accumulation of wealth in the final Prepalatial period may be interpreted as indicators of increasing homoarchisation that characterised the whole island. In a context in which horizontal differentiation is suppressed by rigid structural principles, such as kinship ties, members belonging to gender groups may not have been able to carve out their social status through alternative avenues. Even in conditions of increasing homoarchy, however, we should not assume that gender relationships were necessarily characterised by inequality; rather it is an indication that negotiation of ranking between people of different genders was restricted and discouraged.

Approaching Prepalatial evidence by focusing on principles that governed social relationships has in turn caused us to question the assumption that social complexity is determined by the level of social hierarchy. Social inequality may have been present in one form or another throughout the EM period, but more importantly it is the negotiation, construction and enactment of social relationships that help to elucidate prehistoric social patterns. Archaeological evidence from Prepalatial Crete portrays a complex, multifaceted and fluctuating picture that unilinear evolutionary models focusing on hierarchical phenomena fail to account for. The focus on social dynamics has also highlighted the erroneous conflation of gender roles and status with social hierarchy and complexity:

165 See relevant references mentioned above.
166 Driessen 2010, 12.
(a) social hierarchy cannot be equated with social complexity, as asymmetrical relationships occur in societies of all complexity levels, and (b) social hierarchy does not prevent gender groups from negotiating positions of authority in relevant contexts.

Finally, the question of social complexity remains open to discussion. In the social sciences, the situation of unrest evident in the final Prepalatial period may have posed a threat to the maintenance of stability and thus constitutes an indication of low social complexity. For complexity studies, however, the prominent homoarchisation of the later phase created conditions of fission that entailed the eventuality of chaos, a feature of surprise that is interpreted as a sign of social complexity. I would suggest that it is probably the overlap and interplay of heterarchical and homoarchical elements that underpinned social dynamics and fostered social complexity in Prepalatial Crete, opening up a range of alternative possibilities. Whether we choose to conform to the principles of social sciences or complexity studies, it is essential to realise that we need to shift our focus to the dynamic processes of prehistoric societies that are not restricted by the presence or absence of hierarchical phenomena.
Bibliography


Maria Mina


Connecting with Selves and Others

Varieties of Community-Making across Late Prepalatial Crete

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In this paper I use the lens of communities to reconsider the changing social dynamics of Late Prepalatial Crete. I argue that at this time communities were being formed and maintained at various scales, ranging from the local to the inter-regional, and that persons, material culture, and the physical landscape were all actively involved in this ongoing process. My focus is on a particular artifactual corpus from this period, the “Parading Lions” seal group, which powerfully exemplifies various aspects of how persons and social groups were developing old and innovative ways of comparing and connecting themselves to one another, both in realized and imagined forms of social relations. The seals and their impressions provided material and stylistic/iconographic means for expressing both social distinction and commonality in a variety of venues. The innovative varieties of social comparison and interconnection facilitated by the Parading Lions seals and impressions must, I argue, be embedded in the broader sphere of social changes that were taking place on the island contemporaneously. For this reason I consider possible alterations in the socio-spatial and physical experience of the island in this period, including the development of peak sanctuaries and the region as a scale of lived experience, and the new scale of thinking and moving across the island that such developments would have entailed.

The notion of community has become extremely popular in various areas of anthropological analysis in recent years, providing a means for considering the complex spatial, interactive, and experiential dynamics of social groups. I wish to use the analytical lens of communities to reconsider the particular and multifaceted nature of social life on Late Prepalatial Crete. Specifically I am interested in how people, landscapes and material culture may have been involved in the formation of various intermingled scales of communities during this period, and how these dynamics may have shaped social identities and interaction. My artefactual focus will be the first iconographic seal group represented across the island, known as the “Parading Lions” group. Yet my discussion will necessarily draw in various social activities beyond the topic of seal use, such as ritual action, feasts, and pilgrimages.

There will be several crucial components to my discussion of community dynamics on Late Prepalatial Crete. First, in order to investigate the varieties of communities that would have been at play in this period, we must consider the lived landscapes through which people interacted and in which they would have self-identified as communities. For this reason, a major aspect of my discussion will concern socialized movement through the island’s physical terrain. Second, in any consideration of community one must explore the notions of proximity and distance, both social and spatial. These are especially important ideas to consider in relation to seal use, as seals and seal impressions uniquely play on these aspects of social interaction. Finally, I will treat in detail the evidence for both “realized” and “imagined” aspects of social relations on the island, and how both would have been involved in community-making at local, regional, and inter-regional scales. These three components of my discussion will be intermingled with one another, as they concern the various simultaneous dimensions of living communities.

Locations

Working with the notions of proximity and distance, I would like to begin by considering the various locations in which seals and seal impressions would have performed on Late Prepalatial Crete. The first and fundamental location to consider is the human body, with which both seals and their manifest impressions would have had a necessary relationship. Essentially all known examples of seals from Prepalatial Crete were pierced in order to hang and were presumably worn on the body like pendants, as was the case with seals in later periods on the island. In this position, a seal was intimately associated with a corporeal person, with his actions in different momentary contexts and his statuses therein. Seals visibly worn on the body also would have contributed to a person’s social status, as powerful pieces of material culture deeply connected to social access, authority, and responsibility. To be in possession of a seal implied that one had the authority (a term I use in a loose sense here) to create an impression mark-

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1 See Krzyszkowska 2005, 61 on observable wear in EM II string holes.
ing and/or closing an object, potentially in public performative contexts. Considered diachronically, the physical appearance of seals varied significantly throughout the Prepalatial period. In EM I–II, the majority of seals were fashioned of locally available materials, such as soft stone and bone, and many were altered only slightly into straightforward stamp forms. Some remarkable seals from this early phase were carved into more elaborate forms, including zoomorphic and amuletic examples. Nevertheless, even in the case of these pieces, the intaglio sealing faces of seals in this earliest phase were typically engraved with generic cross-hatched/lattice motifs, which were more or less identical from one seal to another.

Yet moving into the Late Prepalatial period, EM III–MM IA, a group of seals emerged on the island with a strikingly different appearance. These are the seals of the so-called Parading Lions group, which are canonically rendered from imported hippopotamus ivory, usually in a stamp-cylinder form. The name of the group arises from the motifs typically engraved on one of the bifacial seals' faces, which often involved lions, usually arranged in rotating configurations, sometimes accompanied or even replaced by other beasts. The motifs of this group, which I will discuss in more detail below, are stylistically very distinctive as a corpus, and yet each known example is unique in its finer details (fig. 1).

For now I would like to focus on the overall physical character of a Parading Lions seal, as an object worn on the body. The stamp-cylinder form typical of the Parading Lions seals left sections of imported hippopotamus tusk in a powerfully raw form, drawing attention to the material itself (fig. 2). The use of this scarce and relatively unfamiliar milky material likely would have augmented the already powerful social symbolism of a seal, and to have a sizeable chunk of it positioned on one's person would have visibly enhanced the prestige of the seal possessor. This effect would have been strong within local social arenas, such as villages or clusters of villages, where certain fig-

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2 Relaki 2009.
3 See further discussion of Crete's earliest seals, their forms and intaglio motifs (including exceptional examples) in Anderson (forthcoming) and Anderson 2013.
ures may have wished to visually assert a differential status relative to others in their community. Such arenas could have been formal events, such as local feasts or socio-political gatherings, or informal daily activities connected to production, administration, or the like. As persons interacted directly with one another in these local contexts, the ivory seal would have been seen on the flesh or in the hand of the acting seal possessor as he or she engaged in processes of social negotiation, carrying out the constitutive social and cultural work of the community.

Within such local contexts, the Parading Lions seals made an undeniable symbolic gesture to faraway places beyond the shores of the island, places that very few if any of the people seeing the seals likely ever saw themselves. The potential social value and significance of foreign materials on Prepalatial Crete, including the ivory seals, has recently been discussed by various scholars, and undoubtedly varied in complex ways both in and over time. For present purposes, it is enough that we recognize the ivory seals’ bold reference to unfamiliar places, and with it to appreciate the prestige that these objects likely attracted to their wearers. More than merely items of adornment, then, the Parading Lions seals could have contributed to the embedded local social position of persons possessing them.

Many of the Parading Lions seals with secure contexts were found within tholos tombs in the areas of the Asterousia mountains and Mesara plain, where they were presumably deposited with deceased persons. Given various scholars’ compelling suggestions that these tombs served not only as resting places for the dead but also as venues for community activities of a broader variety, we might imagine that the Parading Lions seals were worn and used by living persons at these very same places, where they would have been engaged directly in the shaping of the local community’s vital social dynamics. The seals could have played an equally powerful and embedded role within local communities outside of the Mesara, in other areas of the island where Parading Lions objects have also been found.

This local picture must be complicated, however, by the fact that the Parading Lions seals were not merely socio-symbolic objects: they were socio-symbolic objects involved in the production of other socio-symbolic objects, namely impressions. In direct contrast to the close proximity seals had with the bodies of their human possessors, seal impressions were characterized by their potential distance from the corporeal sealer. Created in one temporal and spatial context as the human sealer impressed the seal into moist clay, the impression then would have been encountered at a subsequent moment, hence in a new temporal and perhaps spatial context, by another human who “read” and responded to it. Thus while an impression had a significant relationship to the person who created it, its unique social interactive role was defined by its ability to move apart from and independent of the corporeal sealer, on its own interactive trajectories. This ability would have been greatly augmented by the Late Prepalatial innovation of differentiated seal motifs (most fully embodied in the iconographic motifs of the Parading Lions group), through which the impression of one seal could be distinguished from that of another. Unlike the earlier seals’ generic lattice motifs, these differentiated motifs enabled an impression to act as a particularized vessel of social identity. Hence manifest clay impressions constituted another form in which social identity was met in Late Prepalatial local communities.

Staying on the topic of the Parading Lions motifs, we come to the first aspect of the seals that suggests a crucial intertwining of local and extra-local communities on Late Prepalatial Crete. The style and iconography of this seal group is highly distinctive, clearly connecting seals and extant impressions found across the island as members of the same macro-stylistic group. All of these seals unquestionably were crafted with some sort of a knowledge of the broader glyptic group and an intention to produce an object in kind. In this way, persons designing and us-

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5 While we can easily imagine an “elite’s” status being differentiated hierarchically from those of others in a community, we should also consider the possibility of heterarchic differentiation; see Crumley 1995; Haggis 2002.
6 E.g., Colburn 2008; Schoep 2006; Carter 1999; Manning 1997.
7 Anderson 2013.
9 See Anderson 2013 for further discussion of seal impressions as independent embodiments of social identity.
Connecting with Selves and Others

ing the seals would have been deliberately and self-consciously participating in a socio-stylistic phenomenon that extended beyond their local interactive spheres, or “networks of relevance”, into multiple regions of the island (fig. 3).

With this unique dynamic, I believe we should see the inter-regional Parading Lions glyptic group as a material instantiation of an extremely significant extension of social identities in Late Prepalatial Crete. While we certainly have evidence of inter-regional importation and exportation of objects in earlier periods, the Parading Lions seals instead provide evidence of persons or social groups (perhaps persons asserting leadership identities) around the island self-consciously seeking to share symbolic material culture with groups in other regions. This is not a matter of importing something distinctively “from elsewhere” on the island, but of producing something held in common. This understanding is supported by the fact that microscopic analyses of the Parading Lions material have revealed an underlying diversity in the technical and sub-stylistic attributes of the seals, which suggests various production contexts, potentially located in multiple areas of the island, some in different regions. That persons were establishing and reproducing this means of material-cultural similarity is remarkable. They were in effect, through this innovative type of material culture, extending the reach of social comparison of identities beyond the spheres of their realized local social interactions. We can constructively think of this linking of distant social identities as the deliberate forging of an inter-regional imagined community.

![Map of Crete indicating sites at which Parading Lions glyptic material has been found. Adapted from map created by Tom Elliott, copyright 2003 Ancient World Mapping Center.](image)

I am drawing a distinction here between “realized” and “imagined” relationships. This is not a hard and fast distinction, and social relations may have both realized and imagined aspects. In his now classic text on the subject, Benedict Anderson\(^1\) discusses imagined elements of communities within his consideration of the emergence of nations, but he also crucially discusses such elements in pre- and non-national moments (as well as pre-modern ones). Indeed, in asserting that a community imagined is in no way untrue or false, he states, “In fact, all communities larger than primordial villages of face-to-face contact (and perhaps even these) are imagined. Communities are

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to be distinguished, not by their falsity/genuineness, but by the style in which they are imagined”. Therefore, focusing on the members of a community as those who imagine it, one should attempt to gauge the particular ways in which, “in the mind of each lives the image of their communion”.\textsuperscript{14}

We can productively consider Late Prepalatial Crete and the Parading Lions group in this interpretive light. Currently it does not appear that settlements located in different regions of Prepalatial Crete were either socio-politically or socio-economically interdependent, nor, as Legarra Herrero had discussed, that they necessarily shared social structure and praxis.\textsuperscript{15} Moreover, although there was marked exchange between different regions of the island even in the earlier Prepalatial periods, there is no evidence to suggest that some sort of over-arching administrative or economic auspices oversaw this movement of things and people. In the absence of such, there is no basis on which to assume that the Parading Lions seal group was associated with an inter-regional socio-economic system. Instead the socio-symbolic significance of the shared, highly distinctive style and iconography of the Parading Lions seal group must be sought elsewhere. In other words, even if the seals may have been used in what we would deem economic activities (as they probably were), the significance of their inter-regional stylistic sharedness cannot be captured therein; it seems to have been of a different nature.

Maria Relaki has recently argued that our sense of Prepalatial “regions”, especially in south central Crete, should be fundamentally reconsidered.\textsuperscript{16} She compellingly contends that even within a space as apparently geographically discrete as the Mesara plain, socio-cultural congruity cannot be taken for granted. Instead she proposes understanding regions as socially, not geographically defined, and as such as being liable to fluctuate and realign. Regions then, can be appreciated as “networks of relevance” between particular locations, arising from the particular repeated needs and interests of people in a given moment. Legarra Herrero similarly asserts that Prepalatial mortuary data indicate a heterogeneity of regional profiles, in which communities’ social practices and systems of valuation varied widely.\textsuperscript{17} Within this context, the wide distribution of the Parading Lions seals is especially remarkable. The seals, and impressions rendered by them, have been discovered at over a dozen sites, spanning northern, eastern, western and south-central areas of the island, with the heaviest concentration of finds stemming from the tholos tombs of the Mesara plain and Asterousia mountains, which may have constituted two distinct networks of relevance themselves.\textsuperscript{18} The objects thus were embedded within a diversity of Prepalatial social spheres, participating in the negotiations and performances of numerous communities. They provided a deliberate, self-conscious link between these places (and persons located therein), a point of intentional commonality that connected, by participating in, the vibrant and variable lives of different communities throughout multiple regions. At the same time, the impressions rendered by these seals, also embodiments of the distinctive iconography, would have had the potential to move between sites, forging pathways of interconnection that interpenetrated multiple regions.

It may seem counter-intuitive to traditional archaeological models to suggest that persons or groups were thinking inter-regionally (i.e., implicitly or explicitly understanding themselves as socially comparable to others beyond their regional networks of relevance) prior to, or without, an underlying inter-regional socio-economic infrastructure to support or “necessitate” the notion. Yet, as Anderson demonstrates,\textsuperscript{19} the sense of “communion” constituting a community is something imagined, especially in cases of communities that exceed boundaries of realized interpersonal knowledge. If “imagining” is the nature of a community’s self-definition, then this is where we should seek the character of a community’s coming into being. In the case of Late Prepalatial Crete, this provides a means for understanding how socio-symbolic material culture seems to have drawn connections inter-regionally before any single socio-political authority had the same reach.\textsuperscript{20} Working in this light, we need not identify an economic or socio-political groundwork subverting the imagined community embodied in the effective inter-regionalism of the Parading Lions seals. What we however should seek is a sense of possible changes in the mutual consciousnesses

\begin{itemize}
\item \textsuperscript{14} Anderson 1991, 6.
\item \textsuperscript{16} Relaki 2004.
\item \textsuperscript{17} Legarra Herrero 2009.
\item \textsuperscript{18} Relaki 2004; Legarra Herrero 2009.
\item \textsuperscript{19} Anderson 1991.
\item \textsuperscript{20} Moreover, considering the Parading Lions seals in terms of an imagined community also allows us to appreciate the various ways in which the objects could have crossed temporal boundaries of realized interactions. For example, while the dating of the seals and impressions is unfortunately weak, evidence seems to span EM III–MM IA. Throughout this period multiple generations of seal carvers and possessors would have made and used Parading Lions seals, thereby manifesting and perpetuating the group. Such trans-generational time depth potentially was significant to the imagined nature of the community. Real or (frequently) imagined, time depth is often a crucial component of communities’ definition; see Anderson 1991; Hobsbawm and Ranger 2010.
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of social groups located at points around the island during the Late Prepalatial period, and how such changes may have been involved in the imagining of new varieties of community. In this direction we should look to the space mediating the poles of these local and inter-regional communities: “mediating” both in terms of distance and, more importantly, in terms of their realized and imagined dimensions.

**Gathering and Expanding: Another Scale of Community to Consider**

Relaki’s problematization of the notion of regionalism emphasizes the need to focus on human action and relation in the definition of social space.\(^{21}\) We cannot take for granted that local communities living within a common geographical zone, or in locations contiguous with one another, understood themselves to share socio-cultural ties.\(^{22}\) Hence to discuss Prepalatial regions we must consider how and why relations may have taken form, what may have motivated people not just to exchange but to develop shared aspects of their socio-cultural lives and how this was carried out. The motivations, and the connections they initiated, would have been of various natures. As Benedict Anderson argues, beyond immediate local communities of daily interaction, the formation of social comparison and commonality involves notional as well as practically actualized connections. Hence even regional networks of relevance would have been constituted in part through the generation and fluid maintenance of imagined relations.

Haggis’ examination of the role of Late Prepalatial peak sanctuaries in many ways draws together these aspects of regional development.\(^{23}\) He argues that regional authorities over agricultural labor in some areas of the island may have been based in ideological power. In the context of developing social interconnections at this broader scale, peak sanctuaries would have provided a unifying venue for regional communities as well as spaces for manifestations of ideological action.\(^{24}\) In many cases peak sanctuaries were embedded in pastoral and agricultural landscapes and were often characterized by considerable time depth as places of ritual activity.\(^{25}\) According to Haggis, elites could have manipulated the power accumulated in these locales through demonstrations of control and/or support of socio-symbolic activities, thereby effecting a claim on the labor of members of the larger regional sphere who held the places as significant. Such manipulations may have involved sponsorship of ritual activities, dedications, filling roles as mediating figures such as priests, and so on.\(^{26}\) Haggis’ discussion importantly extends beyond nascent “urban” centers to include the “countryside”, where dispersed local Prepalatial settlements and clusters of villages were often deeply linked to specific environmental niches worked by labor forces that were probably based in kin relationships,\(^ {27}\) and where, consequently, it is especially difficult to explain the development of regionalism in terms of socio-economic motivations alone.

The possibility that people living in various local communities began to share ideological ties helps us to envision why they may have dedicated their sweat and crops to the benefit of others located beyond their immediate daily social spheres, who were understood as fellow members and possibly leaders of a broader community. The imagined bond of sacred interconnectedness, reinforced and perpetuated by ideological actions and material, thus would have been bound up with practical activities involving agricultural produce and labor. Yet the realized regional links – the actual on-the-ground movement and contact between numerous local communities – probably would have involved a relatively limited number of persons who actually transferred agricultural goods and information across a regional landscape, rather than the regular movement of the broader populations of local communities (in fact, Haggis contends that agricultural produce need not have been centrally stored in all cases).\(^ {28}\) In this respect, a direct, realized experience of the lived regional landscape, based in travels across the terrain at an extra-local scale, may have been restricted in large part to certain persons, such as those who played specific functionary roles in the transportation and perhaps administration of regional agricultural authorities. For the rest of the population, the experience of participating in a regional agricultural community certainly would not have been baseless,

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\(^{21}\) Lefebvre 1991.

\(^{22}\) Legarra Herrero 2009.

\(^{23}\) Haggis 1999.

\(^{24}\) Haggis 1999, 73–81. Haggis also emphasizes that agricultural potential would not have been the leading factor in the prominence of all sites, such as Gournia or Mochlos, and hence that focusing on ideology versus a particular economic framework as a base for social power is preferable (1999, 67). Watrous (2004) also suggests a central role for religion and culture in the Late Prepalatial–Protopalatial social change, emphasizing the incorporation of foreign elements (2004, 271–76).

\(^{25}\) Peatfield 1990.

\(^{26}\) Haggis 1999, esp. 77–81.

\(^{27}\) Haggis 1999; see also Haggis 2002 and (forthcoming).

\(^{28}\) Haggis 1999, 73.
but it may have been premised largely in imagined ideas of interconnection at that scale, possibly including an indirect knowledge of the travels, experiences, and interactions of the few who did fill travelling functionary roles. Regional community formation thus would have arisen from a dialectical interplay of limited realized experiences and broader imagined relations. This situation loosely parallels that discussed by Benedict Anderson concerning 16th through 19th century South America.29 There, Anderson argues, the routes and range of colonial functionaries’ travels in a sense delineated the areas of different social communities, which in many instances would later become nations.30 This was simultaneously a geographical and a social process: as paths were cut across the terrain a sense of linked experience (economic, socio-political, cultural) developed between local communities, the steps and stories of the functionaries bringing the connecting threads – real and imagined – into being.

Anderson also discusses another variety of human movement across landscapes that has played a constitutive role in the formation of communities: the religious pilgrimage.31 In diverse socio-cultural moments and spaces, people have regarded particular places as having a sacred status. That persons living in dispersed locations might regard these same places as holding a specific socio-symbolic significance, and that the appreciation of this significance is thought to be held in common with unknown others, implies the existence of an imagined community. In some cases, it is possible that these dispersed persons might never visit the locale that they hold sacred – the place, like the community associated with it, is for them imagined. Yet an enacted pilgrimage realizes a new and unique dynamism around these places. The journey undertaken by a person to a sacred location opens up the spatial, social, and sensory dimensions through which the landscape – and through it the community – are experienced and thereby constituted. In the case of Late Prepalatial Crete, it is especially crucial to consider peak sanctuaries in this light. While Haggis importantly focuses on the ideological power potentially invested in these places and manipulated at and through them by elites, the physical aspects of the peak sanctuaries as socio-spatial phenomena are also extremely significant. Certainly we should contemplate humans’ bodily encounters within the areas of the sanctuaries themselves.32 But equally, we should consider persons’ embodied experiences as they negotiated their paths through and in the terrain while moving towards the sanctuaries, on journeys likely made along with other people.

Tim Ingold has powerfully discussed how we often neglect feet as a means of complex socio-cultural experience and efficacy.33 People in modern Western cultures usually encase their feet in layers of cloth and stiff materials, inhibiting their ability to directly feel the terrain they travel, which results in “the reduction of the pedestrian experience to the operation of a stepping machine”.34 Yet, Ingold asserts, feet are an important interface with the lived environment: “it is surely through our feet, in contact with the ground … that we are most fundamentally and continually ‘in touch’ with our surroundings”.35 This would be especially true of persons who do not or did not make use of such substantial footwear or regularly travel on paved roads and walkways. Surviving representations from Bronze Age Crete depict human figures both barefoot and wearing footwear. Many representations of footwear, however, stem from images of people engaged in sports or athletic feats, and might best be understood as specialized gear.36 Conversely, we have numerous depictions of barefoot people who are outdoors or in the natural landscape (e.g., the Saffron Gatherers from Xeste 3 at Akrotiri, the Knossos Sacred Grove Fresco, etc.).

In order to appreciate how regional communities may have been realized in part by way of persons’ travels through the Cretan terrain, we need to reconsider the possible significance of walking. As a person negotiates the physical landscape, he or she senses it, Ingold asserts, with the whole body, including the feet and the mind. From this perspective, the social experience of a journey, including the particular motivation to visit or reach a specific place and the inter-personal relations experienced along the way, would be enmeshed with the somatic experience of the terrain itself.37 And in the process of such travels, human feet would wear paths into the land, so that the lived landscape might in fact take on a new socialized shape. Ingold explains this mutual process:

30 According to Anderson, the development of a specific form of material culture – newspapers – also contributed crucially to the formation of these communities in the colonial Americas (Anderson 1991, from 59). This role played by material culture might provide another interesting point of comparison to the situation of Late Prepalatial Crete.
32 For excellent discussions of people’s embodied experiences at Cretan peak sanctuaries, see the work of Christine Morris and Alan Peatfield, e.g., Morris and Peatfield 2002.
33 Ingold 2004.
34 Ingold 2004, 329.
“Indeed it could be said that walking is a highly intelligent activity. This intelligence, however, is not located exclusively in the head but is distributed throughout the entire field of relations comprised by the presence of the human being in the inhabited world … As people, in the course of their everyday lives, make their way by foot around a familiar terrain, so its paths, textures and contours, variable through the seasons, are incorporated into their own embodied capacities of movement, awareness and response … But conversely, these pedestrian movements thread a tangled network of personalized trails through the landscape itself. Through walking, in short, landscapes are woven into life, and lives are woven into the landscape, in a process that is continuous and never-ending.”

Ingold’s focus on experience through the feet provides a useful means for considering pilgrimages to peak sanctuaries as a constitutive process for the regional Prepalatial community. As people left local communities to walk in fields, valleys, hills, and rocky weedy slopes towards a sanctuary, they would have felt their paths as they created and re-created them. These paths would have been walked over and over again by different persons, winding in from various directions and coinciding in certain areas, especially in those spots, we can imagine, where the topography was easier to navigate or where many feet had worn in a clear passage nearing the sanctuary. People were in this way directly engaging with the terrain of the region as a centered social space (even if there were potentially multiple centers), realizing its contours and extent with their sensing steps. It is crucial here that the pilgrim would have had a sense of moving towards something, and this sense of movement towards a focal place would have been shared by persons coming from various settlements and walking different paths. Thus the imagined social cohesion sensed by pilgrims making their ways towards a destination of commonly perceived significance would have been enmeshed in the physical terrain experienced directly by those many travelers, giving that terrain its realized shape as a region.

As numerous scholars have discussed, sensory experiences, mediated and ordered by socio-cultural notions, can mark one’s memory and significantly affect how he or she will act in the present and future as a member of a community. Moments of relative toil, pain, pleasure, exhaustion, vertigo, etc., involved in activities that people associate with a sense of interconnection to one another and to the community as a whole, often deepen one’s self-identification with the group and further position him or her within it. In this way, such experiences continually create and maintain the community through individual bodily experiences. Understood as travel to a shared sacred place, persons’ passages through the textured terrain of the island towards a peak sanctuary could have impressed a realized understanding of the imagined regional community upon their mindful bodies, each individual experience acting as a re-iteration of a community experience. This would have created a sense of communion not only between contemporaries, but also, if repeated over generations, would have provided a sense of time-depth for the community understood as a vital and ongoing whole.

The particular challenges and sensory experiences that travel to a peak sanctuary entailed would have varied from person to person depending on distance, topography of a given path, one’s physical condition, age, and so on. As Peatfield emphasizes, peak sanctuaries were not secluded places separate from local communities, but were prominent points inter-visible with them, in some cases associated with particular sites and importantly part of the region’s shared landscape. From a settlement within the region, the pilgrim’s trek likely would have taken a few hours, through the wild and pastoral terrain. One’s path, then, was not intended as a grueling feat to be endured and overcome, but would have been an extended moment of intense, focused engagement with the physical, sensed reality of the region’s environment. In this way, the location of the sanctuaries at higher altitudes suggests that “heightened” somatic experiences were sought by travelers. The enhancement and extension of time and effort involved in reaching one’s destination by trudging through the natural and unpredictable terrain of sharp rocks.
and vegetation, the symbolic and directly experienced effect of ascending and gaining a different perspective, the experience of achieving a new and reflexive position in the landscape, were all potentially significant factors. Intriguing in this light is the deposition at numerous peak sanctuaries of what may be votive body parts that served as representative prayer devices for sick or injured persons seeking help from a divine source. The possibility that people suffering bodily ailments may have regularly made the trek to peak sanctuaries should remind us that the effort of engaging with the path between one’s local community and a regional sanctuary was attentive and significant.

At this point I would like to briefly draw attention to a specific and relevant dynamic observed in later Prepalatial settlement patterns. Survey and excavation data suggest that towards the end of EM IIB and in EM III, various areas of the island may have experienced settlement contraction. While this seems to have manifested differently in various regions, numerous communities appear to have gathered together at this time, perhaps focused on larger-order sites or areas of arable land, sometimes exploiting new areas. This gathering trend may have been a response to environmental hardships experienced in this period, potentially related to those evidenced contemporaneously in the broader eastern Mediterranean and Near East. As Manning suggests, this could have been a time during which would-be leaders competed for power, perhaps offering different strategies for coping with agricultural challenges and/or by positioning themselves in mediating positions between the community and supernatural powers. In some areas true nucleation potentially continued from this moment (especially in areas of certain large sites in arable zones, such as Knossos, Malia, and Phaistos), while in others, especially in areas of the “countryside”, settlement seems to have (again) dispersed into wider stretches of the landscape.

While careful consideration of these movements stands as an extremely important means of better understanding Late Prepalatial social changes, here I wish to draw out one particular idea. The experience of people gathering together from various local communities, even if in some cases it may have been only for a matter of a few generations, could have been a crucial moment for the formation of regional identities on Crete. Such a period of settlement contraction, perhaps occurring under the pressure of marked environmental change and challenges, potentially would have been a time for both realizing and imagining community on a new scale, through new varieties of shared experience. That is, the practical and symbolic activities involved in linking corporate groups to one another may have seemed newly necessary (for subsistence, for religious reasons, etc.), and could have at the same time generated the perceived necessity of new ways of relating both to one another and to the landscape (e.g., in terms of labor or administration, but also ideologically and ritually, as discussed by Haggis). Hence people were potentially moved (literally and figuratively) to develop a new scale of community, premised in shared practical and symbolic experiences that took place in portions of the island that they newly conceived of as held in common.

It is at this point that pilgrimages to extra-local sanctuaries, as such, may have begun, incorporating the terrain that persons travelled through as part of the experienced region. Importantly, even if, as is evidenced in some areas of the island, this moment of settlement contraction was followed by dispersal, the memory of having gathered together would likely have persisted through generations, perhaps providing the imagined basis for a continued social sense of regional cohesion. Realized interactions on an intra-regional scale – economic, ritual, socio-political, etc. – would have regularly perpetuated and further characterized these regional communities, by continuing to interconnect members of various local communities who self-consciously belonged to a common region.

A moment marked by social groups newly gathering together and developing regional collective identities may have also seen the rise of a mutual awareness and comparison between these formative collective units. In other
words, the development of an imagined and to some extent realized regional consciousness could have provided
the ground from which an inter-regional consciousness began to take form. As a lived process, settlement contrac-
tion and community gathering would have involved intentional decisions made by social groups to associate with
other such groups (and not others), both spatially and socially. Some Prepalatial villages or settlement clusters may
have been split by such decisions, with inhabitants moving in different directions, perhaps maintaining some sort
of contact with or at least knowledge of one another. In any case, persons within these newly forming regional
communities likely would have been aware that similar social coalescences were occurring elsewhere on the is-
land. Further, it is possible that they would have been aware of some of the innovative social strategies (symbolic,
political, etc.) that other young regional communities were developing for the needs of a new scale of social nego-
tiation, and such ideas may have been borrowed, emulated, and even re-conceived between regions. Such strate-
gies may have included activities at peak sanctuaries, at large-scale buildings with courts, in feasting events, and
so on. Indeed the Parading Lions seals embody a mutual consciousness at this supra-regional level. Both Relaki
and Legarra Herrero have argued that the Asterousia mountains and Mesara plain constituted two separate regions
during Prepalatial, and the Parading Lions iconography was shared between and across both. Certainly finds
of Parading Lions objects at sites such as Archanes in central Crete (where the group is very well represented),
Gournes in the north, Palaikastro in the east and Chamalevri in the west, also indicate an active reproduction and
sharing of the iconography between places within quite different regional networks. As objects explicitly linked
to social identity and will, it is especially interesting that persons were choosing to hold the marks of their seals in
common with other people who were living and acting in distant locales. In this context, the Parading Lions objects
appear to have participated in forging a new variety of inter-regional social comparability.

The regional community emerges from this brief analysis as a mediation of local and inter-regional notions and
spaces. While this mediation coincides to a certain extent with scales of distance, we have seen that: (1) the spatial
parameters of communities in fact come into being through social experience, both imagined and realized, and (2)
that the spatial dynamics of a community can alter over time, as fluid elements of a lived landscape.60 Hence the
mediating role of the regional community had more to do with how the various scales of community were experi-
enced, and how, through lived processes, they were brought into being.

The Parading Lions Seals within the Fabric of Late Prepalatial Communities

It is within this fabric of Late Prepalatial community dynamics that the Parading Lions seal group should be con-
sidered. Seals and seal impressions of this group potentially performed within and across various scales of com-
munities, both through direct involvement in realized interactions and by contributing to the imagining of social
links. In fact, seals and seal impressions comprise a variety of material culture that uniquely combines imagined
and realized aspects of social relations, and this is certainly true of the Parading Lions pieces. The seal impres-
ion especially captures this complexity. On the one hand, seal impressions provided for social relations without
inter-personal interaction, without necessarily meeting or even knowing the social other in the flesh, and this is
a defining element of imagined communities.60 At the same time, seal impressions in fact provided new material
incarnations or “faces” of social identities, which could be present in social interactions. In this way, they lent a
tangible, physically realized element to imagined relations. As I discussed before, the innovation of differentiat-
et motifs, distinct from seal to seal, bestowed Parading Lions impressions (stamped on ceramic objects or sealings)
with the potential to perform across extended socio-spatial areas in a way that a generic lattice motif impression
could not. This extended range may have been a factor in people projecting social relations – both real and imag-
ined – across greater distances, enriching the mesh of developing communities at various scales. In this regard, we
should remember that the movements of manifest seal impressions would have been embedded within the physical
landscapes of these communities: they would have been carried across the island’s terrain on objects such as clay
vessels, those objects carried by humans or animals whose feet stamped out paths shaping the land as a lived social
space.

59 Cf. Legarra Herrero 2009, who contends that Prepalatial communities had complex and changeable relationships with one another,
not dictated by (nor, for that matter, limited by) geographical proximity. Relaki 2004 also makes this case, especially concerning
regional-level social interaction.
At this point, I would like to explicitly return to the question of how a Parading Lions seal’s local, regional and inter-regional components would have been productively and necessarily related. On the one hand, is the seal’s highly local position as a powerful object of adornment on a human body, and on the other hand, is the unprecedented inter-regional scope of the seal group’s shared style and iconography. I would suggest that it was potentially within the sphere of the regional community that these crucial local and inter-regional aspects of the seals were engaged in an especially potent dialectic. If persons, perhaps representatives, from various local communities gathered at regional venues for activities of a socio-ritualistic, economic, or administrative nature, it is likely that at such times possessors of Parading Lions seals would have been wearing and thereby displaying the prestigious objects. Moreover, persons may have been not only wearing but also using their seals at such gatherings. Relaki has persuasively suggested that sphragistic seal use on Prepalatial Crete may have been of a performative nature, in which the production of impressions was sometimes publically or semi-publically carried out.\textsuperscript{61} Regional meetings may have entailed activities in which various seal owners participated. Based upon evidence from the Mesara and Asterousia tholos tombs, which have produced the greatest quantity of Parading Lions material to date, multiple persons within a given region likely would have possessed Parading Lions seals contemporaneously, and thus could have been gathered together at a regional event.

We cannot know whether being a possessor of a Parading Lions seal carried any especial significance or status in a regional community (and this could have varied between regions). Yet even in the absence of a formally recognized social status, possession of one of the seals would have been an indication of certain types of social connectedness and power. First, the ivory seals likely would have acted as symbols of the social power linked to attaining and being in possession of a scarce foreign material (even if one’s role in attaining it was indirect).\textsuperscript{62} This may have been important within the context of a regional community, especially if exchange relationships were organized at a regional level. However, of more immediate importance to my current discussion is how a Parading Lions seal would have acted as an expression of the possessor’s participation in an inter-regional material culture phenomenon, in which objects of identity (the seals) belonging to persons in distanced locales were linked to one another stylistically, and, in turn, the identities of their possessors were likewise symbolically linked. In this way, in contrast to the seal’s role in distinguishing its wearer from others within local communities, in a regional context it likely would have also served as a means of connecting oneself to others. If, as I discussed above, the inter-regional social scale was in a sense conceived from the position of the regional community as a matter of social comparison, then asserting socio-symbolic links beyond the region, through valuable pieces of material culture, may have been a powerful social strategy within the context of regional gatherings. Thus a person coming from his or her local community, and meeting with other persons at a regional event, could have used the seal as a means of symbolically claiming a link to an imagined inter-regional social scope. In this way wearing or using a Parading Lions seal could have served as an embodied expression of a person’s various simultaneous scales of community connections, whether they be realized or imagined.

\textbf{Conclusion}

I have attempted to problematize the varieties of community that were active on Late Prepalatial Crete by considering how they came into being, interconnected, and how people, places and things interacted throughout them. My particular aim has been to reconsider the Parading Lions seal group through this knotty sense of communities, as I believe we cannot fully appreciate how these objects participated in social processes without contemplating the social fabric in which they were enmeshed. The Parading Lions seals and impressions were dynamic objects that would have contributed to various scales of community formation and maintenance on Crete. Yet my intention has not been to pose these objects as the principal creators of communities. They, like people, places, and other things, were some of the many participants in these developing, overlapping communities.

\textsuperscript{61} Relaki 2009.

\textsuperscript{62} Cf. Colburn 2008; Schoep 2006.
Bibliography


Social Variation in Middle Bronze Age Knossos

Palaeodietary Evidence*

Argyro Nafplioti

The present study uses high-quality data on stable carbon ($^{13}\text{C}/^{12}\text{C}$) and nitrogen ($^{15}\text{N}/^{14}\text{N}$) isotope ratio from two Middle Bronze Age human skeletal collections from Knossos for the purposes of a palaeodietary investigation in this context, and offers a nuanced insight into social variation in Middle Bronze Age Knossos. These isotope signatures are used to characterize the diet of the respective individuals and to explore in context patterns of dietary variation at the intra- and inter-population level, i.e. between groups determined by tomb and cemetery affiliation, the presence/absence of rare/prestigious burial furnishings, and the sex of the individuals analysed. Among other findings, the results discussed comply with material culture evidence for politico-economic developments in this context and the increasing prosperity of Knossos in the course of the Middle Bronze Age.

Introduction

The present paper stems from ongoing bio-archaeological research of the author in Prehistoric Crete,¹ and focuses on social variation in Middle Bronze Age Knossos. Although the study of mortuary practices, as reflected in funerary architecture, intra- and inter-cemetery spatial patterning, as well as burial furnishings or rituals, clearly enhances research into social variation and structure in past communities,² the relationship between status in life and treatment at death is not straightforward. This may be affected by factors such as ideologies of the community pertaining to death and identity, circumstances of death, or competitive display and agency of the funerary group.³ In this context, analysis of past population skeletal biology can give direct insight into the actual living conditions of the respective people and thereby offer a nuanced understanding of social variation and structure in the community investigated.

Therefore, in order to achieve a more comprehensive reconstruction of social variation and structure in Middle Bronze Age Knossos, the present paper comparatively examines social variation and social status as reflected in mortuary practices, on the one hand, and variation in life circumstances and biological status, as reflected in the skeletal biology of the respective people, on the other hand. To this end, results from the application of state-of-the-art methods and techniques of human skeletal analysis are used for an in-context investigation of dietary variation.

Materials and Methods

Archaeological Context

The two Bronze Age cemeteries at Knossos used in this study are the Ailias chamber tombs and the Lower Gypsades tholos tomb and associated ossuary.⁴ Both sites were excavated in the 1950s by Sinclair Hood.⁵

The 6 chamber tombs excavated at Ailias were used from MM II to MM III, with the latest burials there dating to LM IA. Burials were made in large storage jars (pithoi) or clay coffins (larnakes), and the bodies were tightly contracted. Nevertheless, contracted or extended inhumations on the floor of the tombs were not uncommon either. Pottery was abundant, and sealstones, rings, beads and pins were also present among the burial furnishings. In

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* I am grateful to Dr Sinclair Hood for his permission to study the skeletal collections from the Lower Gypsades and the Ailias cemeteries and sample them for the purposes of the stable isotope analysis. Many thanks go to the Institute for Aegean Prehistory, the British School at Athens and the Knossos Trust for funding aspects of this project, and to Dr Matthew Cooper of the National Oceanography Centre in Southampton, where the stable isotope analyses were performed.

³ Ucko 1969; Pearson 1999, 84; Robb et al. 2001.
⁴ Hood and Smyth 1981, 7, 11.
⁵ Hood 1957; Cook and Boardman 1954; Hood and Boardman 1955; Hood 2010.
Social Variation in Middle Bronze Age Knossos

Tomb VII such rare/prestigious artifacts were numerous. The size, preservation and completeness of the respective human skeletal collection are exceptional. Although the study of the skeletal remains is not yet complete, more than 200 individuals have already been identified by the author.

Less than 2 km from Ailias, the Lower Gypsades tholos tomb and associated ossuary are not typical of Middle Bronze Age tombs in this region. Moreover there is nothing elaborate about its material culture; the burial furnishings comprise of a few stone and mainly clay vases, only a relatively small proportion of which represent fineware. The Lower Gypsades skeletal collection is smaller than that of Ailias and includes a minimum of 56 individuals recovered from the interior of the tholos and mainly the ossuary. Burials here date from MM IIIA to the end of LM IA, which makes the two collections roughly contemporary.

The present paper reconstructs in context the diet of these two roughly contemporary population groups from Knossos and investigates patterns of intra- and inter-group dietary variation in order to assess the relationship between social variation at the time of death and quality of life as reflected in the dietary practices – or social versus biological status – in Middle Bronze Age Knossos.

The specific archaeological hypotheses that are investigated in this paper include: a) social variation in the Ailias cemetery in the form of tomb and sex affiliation and the “wealth” of the burial is reflected in intra-population variation in the quality of life conditions and, in particular, the diet of the respective individuals; and b) social variation in Middle Bronze Age Knossos between the Ailias and Lower Gypsades cemeteries is reflected in inter-population dietary variation, and the poorer diet of the Lower Gypsades people compared to Ailias.

Methods

Stable carbon ($^{13}$C/$^{12}$C) and nitrogen ($^{15}$N/$^{14}$N) isotope ratio analysis was applied to bone collagen samples from 65 individuals from Ailias and 12 from Lower Gypsades and some of these results are presented and discussed here. The samples chosen took into account the biological sex and age at death, dental and skeletal health and musculo-skeletal stress data for the individuals examined, cemetery and tomb affiliation, as well as data on the “wealth” of the burials (i.e. association with rare/prestigious artifacts), as appropriate.

Principles of Stable Carbon ($^{13}$C/$^{12}$C) and Nitrogen ($^{15}$N/$^{14}$N) Isotope Ratio Analysis

The basic principles of $^{13}$C/$^{12}$C and $^{15}$N/$^{14}$N analysis in palaeodietary studies may be summarised in that the body tissues of both humans and animals reflect the isotopic composition of the food they consumed in life, and that the isotope signatures of bone collagen of different skeletal elements of the same individual are the same.\(^6\) Cortical bone stable isotope signatures in particular represent the average signatures of one’s diet approximately over the last decade of his/her life. Analysis of these signatures provides insight into their source, and may thus help reconstruct past diets.\(^7\)

Stable carbon isotope ($^{13}$C/$^{12}$C) analysis can be used to differentiate between marine- and terrestrial-based diets in humans.\(^8\) It can also be used to investigate human consumption of plants with different photosynthetic pathways, i.e. C\(_3\) versus C\(_4\) plants,\(^9\) which however is of no major concern to this study as C\(_4\) plants were only introduced to the Cretan diet in historical times.

Stable nitrogen isotope ($^{15}$N/$^{14}$N) analysis can be used to determine the position of a human or animal in the food chain, since body tissues show an 3–4 ‰ enrichment in $\delta^{15}$N values relative to diet.\(^10\) This is the so-called “trophic level effect”. Thus human bone for example is normally enriched in $\delta^{15}$N by at least 3 ‰ above herbivore collagen, and sometimes also relatively enriched above local carnivore $\delta^{15}$N levels. Likewise, herbivores are enriched in $\delta^{15}$N by 3 ‰ above their own diet. Further, because in most aquatic animals $\delta^{15}$N values are significantly

\(^6\) Schoeninger and DeNiro 1984.
\(^7\) Ambrose and Norr 1993.
\(^8\) Tauber 1981; Chisholm et al. 1982; Pate 1994.
\(^9\) Pate 1994.
\(^10\) Stable isotope concentrations are measured as the ratio of the heavier isotope to the lighter isotope, relative to an internationally defined standard, and are expressed as $\delta$ (delta) values as follows: $\delta X = (R_{\text{sample}}/R_{\text{standard}} – 1) \times 1000$ (‰), where $X$ stands for carbon or nitrogen, $E$ stands for 13 or 15, respectively, and $R$ for the isotopic ratios $^{13}$C/$^{12}$C and $^{15}$N/$^{14}$N, respectively.
higher than for terrestrial ones, probably due to the greater length of aquatic food chains compared to terrestrial ones.\textsuperscript{12} \(\delta^{15}N\) values in human bone collagen can also be used to identify the consumption of aquatic (marine and freshwater) foods.

As a general principle, if human \(\delta^{15}N\) values are within 3–4 ‰ above well-clustered local herbivore values, their diet may be interpreted as containing up to 100 % animal protein (meat, milk etc). If human collagen \(\delta^{15}N\) values are higher than this, consumption of species from aquatic ecosystems may be inferred.\textsuperscript{13}

**Characterization of the Trophic Context**

Following standard practices,\textsuperscript{14} \(^{13}C/^{12}C\) and \(^{15}N/^{14}N\) analysis was further applied to 12 archaeological animal bone samples in order to provide a trophic context for the palaeodietary reconstruction. Stable isotope signatures measured from bone collagen samples from eight herbivores (sheep/goat and cow) and four omnivores (pigs) recovered from the Lower Gypsades tomb and ossuary were used as an indicator of the dietary resources that were potentially consumed by Middle Bronze Age people in the district of Knossos.

**Procedure**

Human postcranial cortical bone samples analysed for \(^{13}C/^{12}C\) and \(^{15}N/^{14}N\) were mainly extracted from the femur (N=35). The tibia, humerus, radius and clavicle substituted for the femur in nine cases/individuals, where the femur was not available. When crania from the Ailias collection could not be securely associated with any postcranial remains, samples were taken from the cranium (N=36). However, intact crania were not sampled. All 12 non-human cortical bone samples analysed represent the postcranial skeleton.

The author carried out sample preparation, collagen extraction and \(^{13}C/^{12}C\) and \(^{15}N/^{14}N\) analysis at the National Oceanography Centre in Southampton. Bone samples were cleaned in an ultra-sonic bath using ultra pure water and collagen was extracted from intact cortical bone fragments of 500–750 mg using a modified Longin method:\textsuperscript{15} Bone samples were immersed in 0.5M HCl and left to demineralise at 5°C. Following complete demineralization, the samples were rinsed in ultra pure water using centrifugation at 2500 rpm. Then pH3 water was added and the samples were heated to 75°C for 48–72 hours in sealed test tubes. The gelatinous solution was then filtered through an Ezee filter and transferred to clean test tubes. Samples were finally frozen and freeze-dried for 48 hours. Collagen samples of 500–550 μg were weighed in tin capsules and analysed in duplicates or triplicates, as appropriate, with a GV Instruments Isoprime stable isotope ratio mass spectrometer coupled to a EuroVector elemental analyser. The \(\delta^{13}C\) values are reported relative to the vPDB standard, and the \(\delta^{15}N\) values relative to the AIR standard. Errors on the \(^{13}C\) and \(^{15}N\) measurements are consistently lower than ±0.2 ‰.

Prior to the start of the project, existing analytical techniques for bone collagen extraction for measuring \(^{13}C/^{12}C\) and \(^{15}N/^{14}N\) signatures were tested by the author by carrying out experimental work on the remainder of archaeological bone samples she had used in her past research. It was observed that bone samples did not normally completely demineralise in 2–5 days as suggested in the literature,\textsuperscript{16} and it was decided to prolong the period of sample demineralization at 5°C to 2 weeks. The alternative of speeding up the process by leaving the samples to demineralise at room temperature was avoided, in order to prevent any collagen degradation.

**Results**

For 80 of the human (Ailias: 53; Lower Gypsades: 15) and animal (12) bone collagen samples analysed, values for the C/N atomic ratio (range between 2.9 and 3.6) and the percent carbon (%C) and percent nitrogen (%N) content indicate excellent collagen preservation.\textsuperscript{17} The remaining 12 were omitted from the present analysis and discussion.

The animal \(\delta^{13}C\) and \(\delta^{15}N\) values provided baseline isotopic data against which the human collagen isotope signatures could be tested for the purposes of reconstructing the diets of the respective individuals. The \(\delta^{13}C\) val-

\textsuperscript{12} Privat et al. 2002.
\textsuperscript{13} Richards and Hedges 2007.
\textsuperscript{14} Bocherens et al. 2007.
\textsuperscript{15} Longin 1971.
\textsuperscript{16} E.g. Richards and Hedges 1999; Honch et al. 2006.
\textsuperscript{17} DeNiro 1985; Ambrose 1990; van Klinken 1999.
ues for all 12 animals tested range between -21.9‰ and -19.8‰, i.e. within the range expected for animals in a temperate terrestrial C₃ ecosystem. As regards δ¹⁵N values, there was no difference between the three pigs (2.6‰ to 4‰), which are generally considered omnivorous, and the six herbivores (sheep/goat and cow) (2 to 4.6‰) analyzed, suggesting a plant protein-based diet also for the pigs.

Human bone collagen δ¹³C values measured from Ailias individuals range between -21.4‰ and -17.4‰ and average at -19.7‰. Values for δ¹⁵N obtained from the same individuals range between 6.2‰ and 9.8‰ and average at 8‰. All human collagen δ¹³C and δ¹⁵N values from the Ailias individuals are plotted in fig. 1. In order to explore the relationship between social variation as reflected in tomb affiliation on the one hand and dietary variation on the other, the shape of the markers used on fig. 1 is different for each one of the six chamber tombs of the Ailias cemetery.

In figure 1 the δ¹³C and δ¹⁵N values measured from the 12 local archaeological animal bone collagen samples are plotted to serve here as an indicator of the dietary resources available to the Middle Bronze Age Knossos people and thus provide the trophic context necessary for reconstructing the diet of this population. The grey horizontal band marks the range of 3–4‰ values above the highest δ¹⁵N herbivore value (4.6‰) from Middle Bronze Age Knossos.

As regards δ¹³C values from the Ailias individuals, at least 19% of the individuals tested clearly shift towards more positive values (-18.4 to -17.4‰) compared to herbivores from the site (-21.9 to -19.8‰). Given the absence of evidence for the introduction of C₄ plants to the Cretan diet before historical times, this finding suggests some probable marine protein input into the diet of these people. Supporting evidence for this assumption comes from the associated δ¹⁵N data.

Bocherens et al. 2007.
Schoeninger and DeNiro 1984.
More than half (59%) of the Ailias individuals yielded δ¹⁵N values within or even above the range of 3–4 ‰ above the highest δ¹⁵N value measured from local herbivore collagen from Knossos. The diet of all individuals in this range must have included up to 100 ‰ animal protein, while the more isotopically enriched δ¹⁵N values (8.6 to 9.8 ‰) representing 36% of the Ailias individuals point to the consumption of aquatic foods, clearly as a dietary supplement and not as a staple. The remaining 41% Ailias individuals for whom analysis yielded δ¹⁵N values lower than the above range, probably included a rather significant amount of plant protein in their diet.

The δ¹⁵N values associated with the more positive δ¹³C values (-18.4 to -17.4 ‰) measured in 19% of the Ailias individuals cluster towards the higher end of the δ¹⁵N range and provide supporting evidence for consumption of marine resources, although not on a regular basis.

Acknowledging that all Ailias tombs are not equally represented in these results (fig. 1), i.e. Tombs I and VIII are severely underrepresented, there is not enough evidence to suggest significant dietary variation among different tombs in this cemetery. In no tomb do the individuals tightly cluster at one end of the range of isotope values to suggest uniformly different protein sources and diets among individuals from different tombs. Nor is there any evidence for the diet of people buried in “wealthier” tombs, such as Tomb VII, for example, being richer in terrestrial or aquatic animal protein compared to contemporary individuals from the other tombs. In figure 1 stable isotope signatures from all six Ailias tombs analysed span the entire range suggesting a range of diets from one that is largely based on plant protein to one where protein is almost exclusively derived from terrestrial animals, or one that is supplemented by marine foods.

However, what is worth noting for Tombs V and VI which are best represented in the analysis, is the inversely proportional representation of individuals showing high terrestrial animal, and possibly also some aquatic animal protein in their diet, versus individuals who received much of their protein from plants. Values for 87% of Tomb V individuals cluster within or mainly higher than 3–4 ‰ above the highest δ¹⁵N value for local herbivores, while the majority (67%) of Tomb VI individuals clusters below this range. Because Tombs I and VI date to MM II and are the earliest in the cemetery, while Tomb V dates to MM III, the above patterning of the data may reflect a temporal pattern in the intra-population dietary variation at Knossos and an increase in the dietary input of terrestrial and aquatic animal protein from the MM II to the MM III period.
Fig. 3  Bone collagen values for stable carbon ($\delta^{13}$C) and nitrogen ($\delta^{15}$N) isotope ratio from the Ailias skeletal collection. Key: grey horizontal band = 3–4 ‰ above the highest $\delta^{15}$N herbivore value (4.6 ‰) from Middle Bronze Age Knossos.

Fig. 4  Bone collagen values for stable carbon ($\delta^{13}$C) and nitrogen ($\delta^{15}$N) isotope ratio from the Ailias and Lower Gypsades skeletal collections. Key: grey horizontal band = 3–4 ‰ above the highest $\delta^{15}$N herbivore value (4.6 ‰) from Middle Bronze Age Knossos.
In figure 2 the shape of the marker is used to differentiate between individuals who could be securely associat-
ed with specific rare/prestigious artifacts (i.e. jewellery or sealstones) from the tombs and those who could not. Interestingly, the pattern of isotope values from individuals associated with rare burial furnishings does not differ from the general pattern of the population data. The isotope values span the entire range measured from the Ailias individuals, and the majority of them (57 %) even appear to have had a significant plant protein source in their diet.

Moreover, in order to pinpoint any sex-specific dietary practices and a differential access of the Ailias males and females to protein sources, isotope signatures for the two groups are plotted in figure 3. Patterning of the data in figure 3 shows a rather high variation of isotope values for both sexes suggesting a range of diets from one that is largely based on plant protein to one where protein is almost exclusively obtained from terrestrial animals, or one supplemented by aquatic foods. Despite the overall similar distribution of the data for the two sexes, data for males point to a comparatively larger input from terrestrial and probably also aquatic animal protein into their diet. The percentage of the Ailias males and females that fall within or above the 3–4 ‰ range above the highest local herbi-
vore δ15N value was calculated as 71 % and 60 %, respectively. These were interpreted to have lived on a diet based almost exclusively on animal protein, while for the remainder much of the dietary protein was sourced from plants.

Finally, in order to investigate inter-cemetery dietary variation in Middle Bronze Age Knossos, and test the hy-
pothesis that the Lower Gypsades individuals lived on a diet of lower animal protein content compared to Ailias, isotope data from both collections are plotted in figure 4. Values for δ13C and δ15N measured from the 15 Lower Gypsades individuals analysed range between -20.3 ‰ and -17.4 ‰ and between 7.3 ‰ and 9.8 ‰, respectively. Patterning of the data in fig. 4 gives negative evidence for the hypothesis tested, as the more tightly clustered Lower Gypsades individuals who mainly fall within 3–4 ‰ above the highest herbivore δ15N value (20 %) or are higher than this range (73 %) appear to have lived on a diet rich in animal protein. Moreover, for at least 60 % of the Lower Gypsades people, who show δ15N values (ranging between 8.5 and 9.4 ‰) higher than 3–4 ‰ above local herbivores values and comparatively high δ13C values (ranging between -18.1 to -17.4 ‰), consumption of marine foods is a valid conclusion.

Although the Lower Gypsades and the Ailias tombs are roughly contemporary, use of the former does not start before the MM III period. Because the present study suggests more access to dietary sources of animal (terrestrial and probably some aquatic) protein for the Ailias individuals in MM III than in the preceding period, the above results for the Lower Gypsades individuals appear to corroborate the temporal trend in dietary variation in Middle Bronze Age Knossos observed above in the Ailias data.

Conclusions

Summarizing and briefly concluding from the data presented in this paper, 13C/12C and 15N/14N analysis suggest higher intra-population dietary variation for the Ailias compared to the Lower Gypsades population groups, and a range of diets from one largely based on plant protein to one where protein is exclusively sourced from terrestrial animals, or one that to some extent is supplemented by aquatic foods. The Lower Gypsades individuals, on the other hand, generally lived on a diet rich in terrestrial animal protein, although more than half of them also con-
sumed marine foods.

Overall, the diet at MM II–LM I Knossos is of high quality and does not significantly vary with either the tomb- or cemetery-affiliation, the “wealth” of the burial, or the sex of the respective individuals. Instead, we may conclude that the temporal trend that may be observed in the variation of the stable isotope data probably reflects contemporary politico-economic developments in this context and the increasing prosperity of Knossos in the course of the Middle Bronze Age.20

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20 E.g. Driessen et al. 2002; Cadogan et al. 2004; Macdonald 2010.
Bibliography


On the Household Structure of Neopalatial Society

Emmanouela Apostolaki

Although socio-political organization has been a principal topic in the history of Cretan Bronze Age research, its direct relation to the basic unit of society, i.e. the household, has been hitherto disregarded. Focusing on the Neopalatial period, this paper discusses the theories proposed in recent studies, which nevertheless employed evidence from domestic contexts to explore social organization in different regions of the island. The paper reviews the relevant evidence and re-addresses the issue using anthropological and historical examples, providing at the same time a methodological framework for the reconstruction of the household form and for its employment in defining social structure in prehistory.

It is suggested that considerable variability may have characterized household structure in Neopalatial Crete and that the complexity involved in it calls for a more thorough analysis of the basic social unit along with more work at the regional and inter-regional levels. It is only through a synthetic approach to the domestic space that the actual components of Neopalatial society may be discerned and an inclusive interpretation of its structure provided.*

INTRODUCTION

The definition of household form, as with other aspects of the household, is by itself very complex. Accumulated knowledge from the social sciences has demonstrated that not only is it time- and place-specific, but also determined by a number of diverse factors. In archaeology household form has mostly been explored with reference to social structure, because of the household’s inherent link to the definition of the latter. Originating from early dialogues on classificatory schemes of societies (matrilineal, patrilineal, etc.) and later reappraised by the introduction of Lévi-Strauss’s concept of “House Societies”,¹ this aspect of the household is generally acknowledged: to define social structure means to understand which socio-economic units assemble to make a society function.

In the field of prehistoric Cretan archaeology household structure and the household as a societal entity remained understudied, despite the prominent position of socio-political organization in the history of the island’s research. Owing much to standpoints of traditional archaeology, the smallest units of society were omitted from discussions of social dynamics, for they were perceived, particularly after the emergence of the palatial system, as driven in life by the political decisions of the higher state and hence as hardly informative about the way the societies of the Bronze Age may have functioned.

The gradual increase of interest in bottom-up approaches has led to the association of various forms of the household with social formation and interaction in Cretan prehistory.² Even so, and notwithstanding that in some cases it has served as a research unit per se, the household is often adopted as a means to refer to a broad range of social acts or to an abstract societal category, which is useful for the analysis of large-scale, long-debated issues. Rather than the complex human mechanisms involved in economic and socio-political life, in several instances it is the buildings that housed them (as some kind of indeterminate frames of action), which support interpretation. Empirically grounded and quantified archaeological information, which could elucidate both the human and material dimensions of households in prehistoric Crete,³ is accumulated mainly through new excavations and is still quite limited.

In the last decade the definition of household structure targeted the definition of social structure specifically with the use of domestic evidence,⁴ filling a long-standing gap since Whitelaw’s early work at Myrtos-Fournou Koryfi.⁵ In what follows the question of social structure is addressed from a household perspective. Namely, by present-

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¹ Carsten and Hugh-Jones 1995; Gillespie 2000.
³ As in e.g. McEnroe 1990; Tsipopoulou 2006; Archondaki 2011; Brogan et al. 2011, 2013; Glowacki and Vogeikoff-Brogan 2011.
⁴ Whitelaw 2001; Romanou 2007; Driessen 2010.
⁵ Whitelaw 1983.
On the Household Structure of Neopalatial Society

ing the theories put forth regarding household form in the Neopalatial period and by reviewing the data employed in each case, along with its relevance to the definition of social organization. The view provided is that from the “inner” of the houses, aided by anthropological and historical records, which are used to elaborate further on the spatial terms of co-residence. It will be shown that a more thorough analysis of the basic social unit can bring about a more complete and more complex picture for the society and its structure as a whole, provided that a synthetic approach is adopted.

Proposed Household Forms

After Evans, who assumed that prehistoric Cretan households were made up of eight individuals, the extent of household population was estimated mainly with reference to demography, for the aims of other research topics, such as domestic architecture and domestic economy, and within site publications. Most hypotheses have reconstructed the social landscape of the island with nuclear families, occasionally extended to ten members. In some cases estimates have not been justified and it is likely that they derived from the common sense equation that small buildings would have housed small domestic groups or from the familiar picture of contemporary western societies, where nuclear family forms are prevalent. Approaches to the issue have involved correlations between the size of the pottery assemblages uncovered and the size of the reconstructed households or incorporation of models like Naroll’s, which postulates ten square meters of sheltered space per individual. Some of the theories proposed are analyzed below in detail.

The Nuclear Family Model

In a widely cited paper exploring the scale and nature of Minoan urbanism, Whitelaw proposed that the Neopalatial household in Crete constituted of nuclear or minimally-extended families of about four to five individuals using the Neopalatial town of Gournia as a test case. While acknowledging the diverse social, symbolic and functional parameters which determine domestic accommodation on different levels (individually, within families, community-wise and cross-culturally), he suggested that with the existence of cultural conventions in layout and construction, social units may be identified spatially. This could hold true for Gournia, where standardization in the scale of houses attests to small independent households of nuclear families. According to Whitelaw, this picture stands in marked contrast with ethnographically documented settlements made up of polygamous families, whose variability in house size is greater depending on the number of siblings they accommodate and comparable family forms.

For the proposed reconstruction, the fact that the general ethnographic trend to link house size with family size (i.e. the larger the residence the bigger the family) is not a straightforward one was also taken into account, as architectural modifications in houses do not always or concurrently follow the developmental cycle of a family. Moreover, it was also relevant that the scarce information on upper floors in archaeological cases, which could increase the total size of a dwelling, does not alter significantly the statistical results, being also relevant to the ethnographic case and not obscuring the pattern of variation that is still traceable through ground floor data. Finally, it was acknowledged that unlike multi-family residences, where specific sets of rooms tend to be duplicated, in those accommodating simpler forms of households, increased house size might correlate to increased household wealth. Larger scale or more differentiated use of scale or more lavish construction thus may indicate wealth differences.

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6 Evans 1928, 562.
8 Hood and Smyth 1981, 10.
9 Whitelaw 2001; Platon 2011.
10 Whitelaw 2001, 18.
13 Whitelaw 2001, 18–9 and 18 fig. 2.2.
Although wealth would need to be demonstrated conjointly with other evidence, the same pattern was noticed in a number of sites examined, whereby small houses comprised the majority and large residences were consistently fewer, as anticipated in a “status-pyramid.” For Neopalatial Crete possibly both a research bias and an actual existing pattern lies behind the observation made that palatial centres and some towns like Palaikastro appear to have incorporated inhabitants of a wide-range of social statuses, judging by the diversity of dwellings, while in other settlements, such as Pseira and Gournia, more uniform social groups may have resided.18

This theory has been variously discussed. Regarding the availability of excavation data, it was observed that insufficient documentation offers a fragmentary picture of most Neopalatial buildings for their location and nature in settlements.19 In terms of methodology moreover, the long histories of habitation attested at most houses may not allow for safe conclusions about space use.20 Both architectural features and the composition and character of households, which may determine the size of a dwelling, are subject to change. Other arguments are concerned more specifically with the data from Gournia. It has been suggested that any increase in space desired by a household could have been materialized vertically, rather than horizontally, as the houses of Gournia were structurally sufficient to support upper floors.21 In addition, the standardized scale of ground plans in the town could have derived from the application of rules for the extent of facades established by the community, to which households complied.22

Co-residence and “Houses”

In an article on residence design and variation in Malia, Romanou put forth the idea of a two-family household residing in one building.23 The article discusses the results of the application of “space syntax analysis” to the study of the architectural planning of a number of Malian buildings, which Romanou conducted in order to explore social organization at the micro-scale. Relevant to this article are the conclusions made for the Neopalatial residence Δβ.

Residence Δβ, which was probably constructed in MM II and finally destroyed in LM IA, was published with limited information on finds24 and hitherto the function of its individual rooms remains problematic. Space syntax analysis was undertaken for the western part of the complex, in which two distinct regions were defined exhibiting a duplicated pattern of integration values and a correspondence of architectural attributes among the spaces included in each.25 On the grounds of the duplication and the similarities observed, it was suggested that function per room may as well have been replicated in the complex, so that a space of specific use in one region would also be found in the other region representing an equivalent use.26 The function of the westernmost set of rooms was subsequently identified based on the set of rooms that are anticipated on lower storeys in Malia, in accordance with the results of space syntax analysis of other dwellings in the town.27 The assumption was made also that comparable observations would stand for the other half of the complex.28

The large multifunctional roofed space and the existence of two similar and autonomous parts in the building indicated lastly that residence Δβ may have accommodated a two-family household.29 Although each family appeared to have been served by its own set of facilities on the ground floor, the two may have functioned in cooperation, their identity shifting between the individual and the communal: in Δβ “the inhabitants lived under the same roof, but maintained a degree of physical, and thus social, separation between them”.30

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19 Platon 2011, 152.
20 Platon 2011, 152.
21 Romanou 2010, 164.
22 Romanou 2010, 165.
23 Romanou 2007.
25 Romanou 2007, 84.
26 Romanou 2007, 84.
27 Romanou 2007, 81.
28 Romanou 2007, 84.
29 Romanou 2007, 85.
30 Romanou 2007, 85.
Recently Driessen enlarged further the scale of the basic social entity of the Bronze Age.\(^{31}\) Departing from the observation that Minoan residential units comprise as a rule extensive uniform complexes,\(^{32}\) he proposed that the most important form of production and reproduction in the prehistoric Cretan society may not have been the nuclear family but a corporate group, the House.\(^{33}\) Much like the ancient Greek notion of “oikos”, a House, according to Driessen, is a social group and a multigenerational formation related to a specific locus, by which it differs substantially from a faction.\(^{34}\) It possesses property, is self-perpetuated through memory and entails hierarchical relations.\(^{35}\) The argumentation relating to the Neopalatial period is as follows.

Apart from the very large size of most residential units, which is believed to be typical of domestic structures in all periods of Cretan prehistory since the Neolithic,\(^{36}\) Whitelaw’s choice to use Gournia as a case study for the nuclear family hypothesis, according to Driessen, invites overall further discussion.\(^{37}\) Despite the lack of a detailed plan, it is questioned that every street entrance in Gournia indicates a house entrance and it is noted that streets and blocks of buildings were laid out at least in the early Protopalatial period and some of them as a unit, the double walls in-between being only few in number.\(^{38}\) From this it is deduced that the neighbourhoods of the town were organised on “supra-household” level.\(^{39}\) In support of the latter, the various open spaces throughout the settlement could be viewed as communal for the organisation of ritual ceremonies, which reinforced group identity.\(^{40}\) The neighbourhood-based organisation in Old Babylonian cities and the similar organization reflected in the practice of Palio in Renaissance Sienna are also offered as parallels.\(^{41}\)

<table>
<thead>
<tr>
<th>The Nuclear Family</th>
<th>Other Domestic Forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>The houses of Gournia have comparable size.</td>
<td>The nature of the domestic space and the domestic population is subject to change.</td>
</tr>
<tr>
<td>The houses of Gournia have comparable construction scale.</td>
<td>A positive correlation between non-dwelling area and limited ground floor is attested both at Gournia and at ethnographic examples.</td>
</tr>
<tr>
<td>The internal arrangement of the houses in Gournia differs from that of ethnographic parallels of polygamous societies.</td>
<td>The standardized scale of the houses in Gournia may be interpreted by the increase of domestic space with upper floors.</td>
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<tr>
<td>Evidence for additional domestic space through upper floors is missing inasmuch in Gournia as in ethnographic examples.</td>
<td>The standardized scale of the houses in Gournia may be interpreted by the possible application of regulations in construction.</td>
</tr>
<tr>
<td>The entrances opening onto the streets of Gournia do not designate separate properties. The residential quarters of the town may have comprised unified domestic complexes.</td>
<td>Double walls, which may separate individual domestic units, are rare in Gournia.</td>
</tr>
</tbody>
</table>

**Table 1** A synopsis of the arguments relating to the reconstruction of the basic social unit of Neopalatial period. Sources: Whitelaw 2001; Romanou 2007, 2010; Driessen 2010; Platon 2011.

\(^{31}\) Driessen 2010.  
\(^{32}\) Driessen 2010, 36.  
\(^{33}\) Driessen 2010, 42.  
\(^{34}\) Driessen 2010, 41.  
\(^{35}\) Driessen 2010, 41–2.  
\(^{36}\) Driessen 2010, 52.  
\(^{37}\) Driessen 2010, 36.  
\(^{38}\) Driessen 2010, 36.  
\(^{39}\) Driessen 2010, 36.  
\(^{40}\) Driessen 2010, 36.  
\(^{41}\) Driessen 2010, 38.
Moreover, the luxury mansions in the towns and the countryside ("villas") could be interpreted as Houses. Noble Houses employing ritual space-features and providing their ritual space again for group-related ceremonies may too have existed, as also Multi-local Houses.

Broadly along the lines of the Lévi-Straussian concept of "House Societies", Driessen suggests viewing the extensive, uniform architectural constructions of prehistoric Crete as the reflection of the "intergenerational investment by a corporate group" in a property with material and immaterial dimensions, which safeguarded memory and warranted continuity, while defining and framing Minoan social relations.

Inferring Households from House Plans

As may be deduced from the preceding discussion, several intricacies are involved in endeavours to correlate the material, in this case architectural, remains with the human behaviour and the social relations that brought them into existence, i.e. the household (an intrinsic problem in household archaeology). To some extent this is owed to the fact that a clear demarcation of boundaries within rows of attached buildings in settlements, which had been inhabited for so long as those of prehistoric Crete, is difficult, if not occasionally impossible. What is preserved on the ground from the apparently large-scale Neopalatial habitation is scarcely uniform, regular or unambiguous. To contribute to this discussion an analysis of the relevant evidence will follow starting with Gournia.

Domestic Units on Excavation

Although exceptional for its one main period of use (LM I) and therefore its homogeneous picture, Gournia appears not to have been built at once as a planned operation. According to the excavator Harriet Boyd Hawes, the roads of the town were constructed during the course of the town’s life, as in some cases they lie below house walls and in others they had been inserted entailing the modification of some houses’ layouts. Non-synchronous construction was attested both in relation to whole residential quarters (e.g. not all houses in Quarter A were in use at the same time, Quarter D was abandoned relatively early in the history of the settlement, etc.) and at the level of individual dwellings (e.g. Houses Ca and Cb once formed a whole, Houses Ef and Eg were earlier than others and formerly united, etc.), all within designated “Town Period” LM I.

The presence of double walls in a residential block may be an indicator of the existence of separate adjoining buildings. Their absence conversely could imply unification of space, as argued for Gournia. Double walls however are in general infrequent throughout Crete, the most popular building system being the agglutinative. In addition, they may be incorporated too at places where the structure needs to be strengthened, usually because of the inclination of the ground or to support a superstructure. Houses built on the sloping periphery of the Gournia acropolis are likely to have necessitated support and in fact in the area of houses Co–Ct in

\[\text{Fig. 1} \quad \text{Quarter C in Gournia showing examples of cyclopean construction and double walls (adopted from Fotou 1993, Plan B).}\]

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42 Driessen 2010, 53.
43 Driessen 2010, 55.
44 Driessen 2010, 57.
45 Souvatzi 2007.
46 Hawes et al. 1901, 21.
47 Hawes et al. 1901, 24.
48 Hawes et al. 1901, 24.
49 Hawes et al. 1901, 26.
Quarter C for example, which has been used to exemplify a typical neighbourhood block of Gournia, some house walls are reported to have been of “cyclopean” construction for structural reasons. In that same area the excavator found it hard to identify C’s limits from Ce and Cg, the former two of which have a double wall as a border, while Cf was eventually published with a double wall incorporated in its interior (fig. 1).

On the other hand, cyclopean construction in Gournia has also been viewed as an indicator of status and it has been linked with the operation of clans. As the town was undergoing the process of urbanization, different clans possibly occupied different blocks, at the centre of which a house was built incorporating cyclopean masonry and in that way signalling power and status for the individual or family who occupied it. This theory was based on the observation that only one house within each block in Gournia had cyclopean walls and these faced onto streets. Quarter C with its many cyclopean structures was found to be an exception, likely to be justified by the degree of dependence on the neighbouring palace.

On the grounds of general observation, it thus remains difficult to assign structural elements to specific units and to establish habitation phasing at a micro-level. For this, more detailed work is required focusing on joints and abutments of walls as well as on other construction details, as that of McEnroe in the town of Pseira. Problems of boundary definition, “corrections” on the published plan in relation to the excavated features, stratigraphical evidence and many more were brought to light by Fotou’s detailed study in the early 1990s. Even so, Hawes’s remarks leave little doubt that building in the town followed people’s lives during the centuries-long use of the settlement.

Of equal significance is the observation that not every street entrance necessarily indicates a house entrance. Similar to Pseira, some houses spreading over two terraces in Gournia were found to have one entrance at each level, therefore two per domestic unit. Yet to extrapolate that the multiple doorways along the streets of the Neopalatial towns gave access to unified residential blocks, one needs to rule out first the possibility that separate units were not recognised during excavation, due to their very own complex picture.

For the excavator of Gournia the limits of the houses she defined were only roughly exact, while all spaces in each quarter of the town were numbered sequentially “to avoid the assumption that the writer’s distribution of rooms into houses is to be considered final”. This is an explicit reference both to the ambiguities of the actual field work and to the relativity of its interpreted outcome. Other excavators have found it also necessary to clarify their own conventions in distinguishing between houses.

Comparable remarks could be made for most settlements, e.g. for Zakros and Palaikastro. Buildings with very irregular ground plans, exceptionally large sizes and awkward features seem to betray the practical difficulties encountered in the field. The picture becomes even more bewildering close to the centre of residential blocks, where the interconnections of spaces are often lost. Viewed in this way then, the topographic plan of Gournia would probably look similar today in many ways to that of Palaikastro, namely with intact blocks rather than houses flanked by a network of roads, had not specific domestic units been distinguished by the excavator. On the other hand, a habitation pattern may be actually discernible in the repetitive arrangement of paved vestibules that were entered from the street, around which other (ground and basement) rooms were laid and occasionally stood a stairway to the upper floor. If not all, at least some of the rooms assigned to specific houses must have comprised separate units.

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50 Driessen 2010, 37 fig. 3.2.
51 Hawes et al. 1901, 24.
52 Fotou 1993, 68.
54 Zeilinski 1998, 405.
55 Zeilinski 1998, 405 n. 28.
57 Fotou 1993.
59 Hawes et al. 1901, 24.
60 Hawes et al. 1901, 22.
61 Betancourt 1995, 73.
62 Hawes et al. 1901, 24.
Interpretation with One Line of Evidence

To what extent can the architectural record alone be used to define household composition? In the aforementioned study by Romanou household population for Neopalatial residence Eα in Malia was estimated on the grounds of the reconstruction of function from architectural evidence. As reconstructed, residence Eα was self-contained to accommodate an autonomous family,\textsuperscript{63} with a roofed multifunctional space (taken from ethnographic examples to represent the actual dwelling space of a residence)\textsuperscript{64} that corresponded well to a group of four to seven or a nuclear or minimally extended family.\textsuperscript{65}

Since residence Eα was found empty,\textsuperscript{66} space use for its rooms was defined by means of analogy with the MM II Atelier de Sceaux based on the very similar integration values, which space syntax analysis produced, and similar architectural attributes, which characterised the individual spaces of the two buildings when compared (internal features, spatial proportions, isolation/elevation etc.).\textsuperscript{67} Considered together, the above indicated for Malia a culturally embedded, well-defined and long-lived relationship between spatial design and activity organization.\textsuperscript{68}

Viewing residential design in Malia as impervious to change, nevertheless, may not allow for similar correlations between the natures of the households in the town: Eα is interpreted as a dwelling, while the Atelier de Sceaux apparently facilitated a specialized profession, although it may have served as a residence too.

To reconstruct identical functions in the spaces of the two buildings means to ascribe similar needs to the respective households that used them. And this is not straightforward to ascertain, particularly in the absence of additional supportive evidence for residence Eα. Furthermore, taken together with the other two buildings, in which a consistent social group was proposed, i.e. the Atelier de Potier and the Hagia Varvara building,\textsuperscript{69} the question is raised whether the number of members, economic condition, overall needs and preferences of all these households could have remained stable for so long and during their co-existence, as to adhere to specific tasks and to carry them out in exactly the same locations.

That architectural form does not necessarily coincide with function has been well established in research.\textsuperscript{70} Likewise, the reality of the Neopalatial houses appears to be a lot more complex than to allow logical anticipations for room use without sufficient associated evidence.\textsuperscript{71} Judging by the types of finds recovered in many instances, func-

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\textsuperscript{63} Romanou 2007, 86.
\textsuperscript{64} Romanou 2007, 83 n. 8.
\textsuperscript{65} Romanou 2007, 83–4.
\textsuperscript{66} Pelon 1970, 162.
\textsuperscript{67} Romanou 2007, 82–3.
\textsuperscript{68} Romanou 2007, 83 and 83 n. 7.
\textsuperscript{69} Romanou 2007, 83.
\textsuperscript{70} Parker Pearson and Richards 1994; Palyvou 2003, 227–29.
\textsuperscript{71} According to Fotou and Michailidou (2006, 95) the role of architecture in the definition of function is more crucial than that of finds, as the latter may be recovered in secondary deposition, may have served multiple functions originally and may not provide any evidence for activities relating to the social use of space.
tions were probably merged within the domestic sphere in spaces other than or additional to the one recognised as “multifunctional”. Especially for the category of houses under discussion the daily use of space must have entailed considerable flexibility.72

The two-family household model in residence Δβ in Malia was similarly grounded on the analogical definition of function again because of the lack of associated finds there. The spatial design, which resulted from the reconstructed functions, and the social principles that this reflected, were employed in turn to elucidate a co-residential habitation. It was suggested, for example, that the existence of two separate washrooms in place of a large communal one could mirror beliefs about privacy, in which case the number of washrooms in a building could serve as an index to the number of the subgroups co-residing there.73 One washroom (room 5) was identified in the residence, because it was anticipated on the ground floor for a Malian dwelling and due to its location, integration degree and floor size, while the existence of the second was predicated by the duplication pattern.74 According to the definition provided, bathrooms are small spaces of low elevation or back-facing position, with evidence for a need for drainage, which were found empty and were possibly used for industrial, hygienic or ritual purposes.75 Whatever the function served, it was assumed to have been duplicated in Δβ, though no features regarding drainage were found in any room.

Finally, to assess the results of space syntax analysis, for which every space within a network contributes to the calculated total,76 it needs to be taken into account that in the case of residence Δβ the limits remain unclear. As it stands, the building covers an entire town block, its southern part was found largely destroyed and several of its sections may have comprised of distinct units at some point in its history.77 Isolating therefore the most concise part of it, the NW, and choosing to focus on one of its sub-parts, the westernmost, involves the risk of missing a substantial amount of archaeological information in the process (fig. 2). Where would each of the components of the co-residence reconstruction fit, if the actual residential unit of Δβ proved to be larger or smaller?78

Perplexing the Picture with More Variables

When interpreting domestic arrangements and space use, more parameters may yet come into play. In the case of Malia again, it was suggested that the architectural principles established by the community could be negotiated to modify functions and serve new needs.79 A relative degree of flexibility in the definition of space was thus anticipated in Malia, construed as the result of normal adaptation to household fluidity, rather than a reflection of island-wide sociopolitical developments.80 In its final occupation phase right before the LM IA destruction residence Δβ possibly accommodated only one family which was based in the eastern complex and used an isolated storeroom in the west.81 Following a natural developmental cycle, the population of the complex may have decreased and the co-residential group may have given way to a nuclear family, with space reconfigured to it accordingly.

Although the introduction of the factor of the developmental cycle is important, as it urges further exploration of daily living in prehistory, it needs to be stressed that similar architectural modifications with those of residence Δβ (blockings, size reduction, etc.) are observed in Crete, though not exactly simultaneously, however, within the period considered (late LM IA–LM IB), island-wide.82 Forty-four cases of door blockings (corresponding to double number of interior spaces) have been recorded in the Neopalatial urban complexes of East Crete, indicating that not all could have resulted from the same causes.83 Quite naturally Hawes paralleled the blocking of the entrance of house Ck in Gournia with a practice followed by Cretan villagers of the 19th century, when political instability

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72 Apostolaki 2014.
73 Romanou 2007, 85.
74 Romanou 2007, 84.
75 Romanou 2007, 79.
76 Cutting 2003, 5.
78 This is precisely the topic of an article, which appeared after the conference, Bradfer-Burdet and Pomadère 2011.
79 Romanou 2007, 86.
80 Romanou 2007, 88.
81 Romanou 2007, 86.
83 Apostolaki 2014.
often compelled them to abandon their houses.\textsuperscript{84} Along the same lines, fluctuation of the number of family members may not explain why, for example, in its last phase of use residence Εα  in Malia not only became smaller in size, but also inferior in quality of construction.\textsuperscript{85}

Inferring then from all the above at the end of this data review, it should be underlined that the definition of household form and its association to the size and character of domestic space require as a synthetic approach as possible, given the availability of the data. By this it is meant that all strands of evidence should be taken into account, even if negative, and all possible correlations (between location of house, scale of construction, architectural features, types, quantities and contexts of finds etc.) made, before conclusions about the nature of the population group using one building can be reached. And even then, conclusions are subject to revision based on the larger picture.

The recently excavated House A.1 at Papadiokambos, Siteia, for instance, is likely to exemplify some form of Neopalatial co-residence or extended social formation. A duplicated pattern of three-room arrangement on either side of a staircase, along with a large body of artifactual and ecofactual evidence, including three meals in preparation at the time of destruction,\textsuperscript{86} may be indicative of such type of household. Tested against a larger sample of comparable (i.e. non-elite) domestic contexts of East Crete, however, with the aforementioned holistic approach, it becomes plausible that the many cooking installations uncovered at Papadiokambos may not relate to the nutritional needs of the occupants, but in fact to other activities of the respective household(s). Therefore they may not be representative of a large residential group, as is likely to have also been the case for the impressive cooking assemblages of the Artisans’ Quarter in Mochlos.\textsuperscript{87}

This larger picture needs to correspond both to broadly contemporary destruction layers and to similar overall characters of the individual units examined, so as to secure the deriving conclusions methodologically. Besides inter-site differences of wealth/status and possible regional trends in architectural construction and space use, it should be taken into account that the “ordinary” domestic contexts of Bronze Age Crete are a small palimpsest of history in reality and that households themselves have a processual character, which is impossible to approach on prehistoric grounds.\textsuperscript{88} Time passed and household members or even generations (given life expectancy in prehistory) changed, bringing together variability, which is attested at the material record.

Once as many of the above criteria as possible are met, a synthetic view may reveal a more complex picture of the social landscape and in the case of the Neopalatial period a more diverse domestic population, even on inter-site level. This is suggested by two other recent studies involving domestic structures of the same chronological horizon, the so-called Building of the Niches and Building B in Zakros. In the former, the detailed analysis of architecture combined with quantitative data on pottery indicated that the reconfigurations of space observed might pertain to household wealth; namely, to a change of the character or status of the household using the building, which impacted upon domestic economy at some point of its lifecycle.\textsuperscript{89} In the latter, in contrast, the distribution of functions, as reconstructed on the grounds of pottery analysis and associated with architectural evidence for division or increase of the interior, led to the hypothesis that an extended household was formed in the course of time, which adjusted its living space according to its needs.\textsuperscript{90}

Although these are interpretations of individual researchers, for reasons that are further analysed below it is believed that the domestic groups of Neopalatial period may have been as diversified as its material remains in detail. This would be more in agreement with the biological cycles of the populations of Neopalatial settlements and also logical to expect: unless some violent social rules were applied, somehow orphans and disabled would have to be housed and maintained in practice together with kinship-based structures.

How more complex the definition of prehistoric household form may be, is explored next through a closer look at domestic organization from the perspective of anthropology and socio-economic history.

\textsuperscript{84} Hawes et al. 1908, 23.
\textsuperscript{85} Pelon 1970, 161.
\textsuperscript{86} Brogan et al. 2013.
\textsuperscript{87} Apostolaki 2014.
\textsuperscript{88} And which implies that in order to determine the predominant or average household type of a society one needs to follow up the developmental cycle of the different units making it up for several generations, Hammel and Laslett 1974, 98.
\textsuperscript{89} Archondaki 2011.
\textsuperscript{90} Platon 2011, 156–57.
In pre-modern Greece household composition varied. For the zone of the Aegean islands anthropological work combined with known customs for the inheritance of paternal property (15th–19th centuries) suggests the predominance of the nuclear family.\(^{91}\) In contrast, Venetian and Ottoman censuses for the tax-paying population of other Greek regions list multi-member households including extended families (e.g. fathers and one or more married sons, co-residence of three generations, i.e. father, married son and married grandson, etc.) and fraternal households.\(^{92}\) Lineages appear as well to have been an important constituent of Greek social structure with hierarchical organization and distinct codes perpetuating cohesion (table 2).\(^{93}\)

Likewise, a range of household forms existed in pre-industrial Europe (14th–18th centuries). Nuclear families, fraternal joint units and extended households with various members, not necessarily kinship-related, such as widows, orphans and working personnel, were routinely formed.\(^{94}\) Depending on the phase of the developmental cycle of the family as well as the particular circumstances at the time of recording, an impressive variation of household structure was concealed in historical documents. Furthermore, in some instances it was noted that different models of domestic organization co-existed in a society\(^{95}\) and in others, that the difficulties of daily living altered the established family patterns in practice.\(^{96}\) Because of this picture, household diversity is considered as obvious in contemporary household studies and occasionally even it is over-emphasized.\(^{97}\)

Nonetheless historical research and research of the sub-discipline of the History of the Family have deduced two other conclusions that may be relevant to the topic discussed. First, that both in pre-modern and contemporary societies, cross-culturally, the nuclear family unit outnumbers the rest.\(^{98}\) Despite its idealized western connotations, this has not been a derivative of emotional ties exclusively in history, but also one of the diachronic tendency to maintain family property united. Second, that socio-economic reasons are usually held responsible, when

<table>
<thead>
<tr>
<th>Region</th>
<th>Household Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone of the Aegean Islands</td>
<td>The nuclear family</td>
</tr>
<tr>
<td>Epirus</td>
<td>Extended families: parents + married children</td>
</tr>
<tr>
<td>North Peloponnesus</td>
<td>Four types of extended households: father + 1 or 2 married children 2 or more married brothers with married children father + married son + married grandson (rare) father + son-in-law (rare)</td>
</tr>
<tr>
<td>Euboea</td>
<td></td>
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<tr>
<td>Serres</td>
<td>Extended families</td>
</tr>
<tr>
<td>Zone of the Ionian Islands</td>
<td>Brotherhoods*</td>
</tr>
</tbody>
</table>

*Common type of domestic formation consisting of members, not necessarily brothers, who shared shelter and resources and were bound by contract to inherit their property to the brotherhood.

**Table 2** Domestic organization during modern history (15th–19th century) in different Greek regions. Source: Asdrachas 2003, 124–25 and 135.

**Domestic Diversity in Actual Terms**

In pre-modern Greece household composition varied. For the zone of the Aegean islands anthropological work combined with known customs for the inheritance of paternal property (15th–19th centuries) suggests the predominance of the nuclear family.\(^{91}\) In contrast, Venetian and Ottoman censuses for the tax-paying population of other Greek regions list multi-member households including extended families (e.g. fathers and one or more married sons, co-residence of three generations, i.e. father, married son and married grandson, etc.) and fraternal households.\(^{92}\) Lineages appear as well to have been an important constituent of Greek social structure with hierarchical organization and distinct codes perpetuating cohesion (table 2).\(^{93}\)

Likewise, a range of household forms existed in pre-industrial Europe (14th–18th centuries). Nuclear families, fraternal joint units and extended households with various members, not necessarily kinship-related, such as widows, orphans and working personnel, were routinely formed.\(^{94}\) Depending on the phase of the developmental cycle of the family as well as the particular circumstances at the time of recording, an impressive variation of household structure was concealed in historical documents. Furthermore, in some instances it was noted that different models of domestic organization co-existed in a society\(^{95}\) and in others, that the difficulties of daily living altered the established family patterns in practice.\(^{96}\) Because of this picture, household diversity is considered as obvious in contemporary household studies and occasionally even it is over-emphasized.\(^{97}\)

Nonetheless historical research and research of the sub-discipline of the History of the Family have deduced two other conclusions that may be relevant to the topic discussed. First, that both in pre-modern and contemporary societies, cross-culturally, the nuclear family unit outnumbers the rest.\(^{98}\) Despite its idealized western connotations, this has not been a derivative of emotional ties exclusively in history, but also one of the diachronic tendency to maintain family property united. Second, that socio-economic reasons are usually held responsible, when

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91 Asdrachas 2003, 124.
93 Asdrachas 2003, 135. Houses of Venetian Crete, for example, numbered 200 and 300 members, while one from Sfakia was constituted of 600 in the 16th century.
95 Gerber 1989, 176.
96 Solien de González 1965, 1544.
98 Laslett and Chamoux 1972, 851; Asdrachas 2003, 130.
some forms of extended households are encountered.99 Exploitation of resources,100 environmental conditions,101 security,102 religious beliefs,103 taxation pressure, tradition and ideology104 are some of the latter, together with the social bed that would have secured the sustainability and reproduction of these extended formations. This is not to say however, that organization at the micro-scale should be interpreted deterministically, but that its essential practical dimensions need also be recognised.

The spatial expression of household diversity is equally varied with the mechanisms determining it. Large domestic groups may be accommodated in large complexes105 similar to those of the prehistoric Near East.106 Or it may be the wealth and status of the owners that defines the scale and lavishness of construction, as par excellence materialised in Roman times.107 Likewise, susceptible to the availability of the living space and to the means and sources of the occupants, functions may be specialised or merged in house interiors, as abundant examples of vernacular architecture show (fig. 3). Correlations between the extent of household population and the extent or morphology of domestic structures therefore are not direct, though again it should be noted that prosperity and social position tend to be expressed through size and particularities.

Examining the spatial terms of co-residence in yet more detail perplexes the issue still further. In some examples of joint habitation it has been observed that different sub-groups may shield their nuclear identities by defining smaller spheres of action within the communal space, often centred around a hearth.108 In others, including two much discussed formations in the field of household studies, the Balkan zadruga and the Mesoamerican barrio-organization, households may share resources and facilities, but maintain distinct constructions for conjugal units

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100 Articles in Coupland and Banning 1996.
101 Hayden et al. 1996, 152.
103 Tentokali 1989.
104 Hammel 1980, 249–50.
105 Coupland and Banning 1996.
106 Banning 2010.

**Fig. 3** The houses of S. Doulgerakis in Mixorouma, Rethymno (left, ground floor) and of M. Nounanakis in Korakies, Chania (right) with defined areas of very different scale for similar needs (adopted from Vasileiadis 1983, 134 fig. 162 and 202 fig. 244).
again with the aim to protect their privacy.\textsuperscript{109} In all the above, physical demarcation within the communal space is obscure and the overall picture provided is that of a corporate group. Is it then the facilitation of practical needs, which results in the sharing of space, or the need to protect privacy and identity, which leads to the maintenance of smaller distinct constructions/areas that should play the primary role in the definition of domestic organization? To put it differently, is this form of living corporate-based or nuclear-based? And how would this picture be transferred to the prehistoric record?

And finally, there exist “houses”. The novelty of Lévi-Strauss’s theory on social structure concerned the shift of interest from kinship to what he essentially defined as social alliances. Namely, relations that were created on purpose under the disguise of kinship and/or affinity and allowed certain corporate bodies in societies to obtain financial and subsequently other types of power, which they safeguarded through real or imaginary lines.\textsuperscript{110} “Houses” were particularly durable and widespread geographically both in his time and throughout history. If such similar formations are to be sought for in prehistoric Crete, some clarifications are necessary.

Operating at a different and apparently deeper societal level, “Houses” were created irrespective of and in parallel to all types of households.\textsuperscript{111} The expression of membership in them was not necessarily interwoven with daily acts, but also with rare occasions, like rituals,\textsuperscript{112} and the reference to a common origin by their members could entail domestic spaces as also sacred heirlooms, oral traditions\textsuperscript{113} or locations, such as churches and monasteries.\textsuperscript{114} “Houses” were thus only broadly linked to space rather than in the sense of co- or adjoining habitation of their associates, even if kinship is known to have played a primary role for the establishment of neighbourhoods in, for example, pre- and modern rural Crete.

From this angle, it is proposed that the methodological constraints of identifying specific “Houses” at the complexes of prehistoric Crete, as earlier analysed, should not exclude the possibility that some wider social interconnections may in fact have existed in the Neopalatial period, which are albeit difficult to discern given the present state of remains and may not ever be discernible. Once more, precisely because of their immaterial dimensions, an array of evidence is needed to identify “Houses” archaeologically: in the case of the Classic Maya burial, architectural and textual data was combined for this purpose.\textsuperscript{115}

Conclusions: From Social Unit to Social Structure in Neopalatial Crete

As the fragmentary picture of the domestic sector of Neopalatial society is being completed, it seems to become clearer that roughing it out by choosing between one or the other type of household may not be fruitful or even close to Neopalatial reality, when the question of social structure is addressed. The aim of this paper was to show that domestic organization in Late Bronze Age Crete should be viewed through a more composite lens relating both to the array of evidence employed and to the range of possibilities of domestic forms that are taken into account.

The quality of the existing data entails methodological limitations, which may obscure the interpretation of domestic contexts, as demonstrated in the examples of the reconstruction of Lévi-Strauss’s type of “Houses” at the residential quarters of Gournia or the attribution of function by means of analogy and without associated finds in the residences of Malia. Because of this, it has been emphasized that correlations between architectural construction and size of the domestic group that uses it, especially with regard to old excavations, need to be established on the basis of combined evidence.

A view through diachronic and cross-cultural history, moreover, along with what would be “reasonable” to expect in terms of human lifecycles make it possible that different social formations may have co-existed in settlements during the period discussed. It is proposed that the Neopalatial social landscape may have been constituted of diverse units, be it single- and multi-member households or nuclear families and even “Houses”. The variability of the material record attested is likely to pertain to the fragmentation of the available evidence inasmuch as to the complex nature of households themselves in real life.

\textsuperscript{110} Lévi-Strauss 1982, 174.
\textsuperscript{111} Asdrachas 2003, 135. See also Table 2.
\textsuperscript{112} Gillespie 2000, 47–8.
\textsuperscript{113} Waterson 1995, 50, 58, 68.
\textsuperscript{114} Asdrachas 2003, 136.
\textsuperscript{115} Gillespie 2001, 93.
A complete assessment of household composition in Neopalatial Crete, lastly, would require considering the evidence from additional contexts, such as houses neighbouring palaces, other luxury and rural mansions, special-purpose buildings, workshop-dwellings and so on. All these structures accommodated a population apparently differentiated in character, occupation and property, as deduced from what was left behind in each case with all research documentation problems taken into account. In this sense, Whitelaw’s suggestion that the populations of Gournia on one hand and of towns like Zakros and Palaikastro on the other were possibly altogether different in character might not prove far from reality after thorough analysis of the corresponding data.

As archaeology differs substantially from anthropology and history, it remains a problem how to infer the multi-dimensional complexity of domestic organization from concrete material evidence however. Is it ultimately feasible to approach and interpret social structure in prehistoric Crete? The argumentation developed above meant to make evident that it is, provided that more detailed studies of the domestic space are undertaken and a progressive move is made from individual units to inter- and intra-site levels following a similar, comprehensive approach. The key to defining household form and accordingly move towards social structure lies in the interpretation of the diversity, which may be hidden in the record and which can be best understood on synthetic grounds. The preconditions are that both the domestic space and the household as a human mechanism be perceived as equally complex.
Bibliography


Manpower and Neopalatial Architecture

The Architectural Project as a Meaningful Experience

Maud Devolder

The built environment of Neopalatial Crete is considered here through the manpower implicated in its production. This approach is based on a quantitative method of estimating the time needed to build a structure. It relies on standard costs empirically established through experiments, observations and accounts of large building sites. The volumes of materials of a selection of Neopalatial buildings which offer a sufficient degree of architectural precision are estimated, to which standard costs are hence applied. Based on such application, the strong polarisation between the costs of Neopalatial simple and complex buildings is obvious, but more pertinently the relationship between the potential workforce and the costs of simple or vernacular architecture reaffirms the involvement of the inhabitants in the construction of their own homes. This statement makes it possible to explore the size of a Neopalatial social unit associated with vernacular architecture. Complex or “polite” architecture shows a drastically different scheme. In this case, the manpower needed by far exceeds the capacity of the residents to provide the required workforce. Rather, it indicates the privileged access of the commissioners to resources, both human and agricultural. They were able to mobilise many workers, amongst whom were specialists, thus relying on a totally different kind of workforce, both in terms of availability and nature.

Introduction

Since the seminal work that was carried out in the early 1970s, studies have focused on many aspects of Minoan architecture.1 Its materials and techniques, their development throughout Bronze Age history and their diffusion both on the island and beyond its physical limits are well known. Such knowledge is also constantly being enriched through new discoveries. Based on this wealthy corpus of data, theories were developed that highlighted the active role of architecture in shaping identities and diffusing ideologies. Such studies stressed marked distinctions between edifices. Although intermediate categories appear according to the selected study parameters, heightened polarisation distinguishes between simple and complex architecture.2 Among the parameters that are more or less present within one category or the other, formal traits were highlighted. An elaborate layout or design, sophisticated structural features – such as ashlar, polythyra or lustral basins – and in some cases lavish architectural decoration characterise complex Minoan architecture. Conversely, those features are absent from simple buildings which more humbly meet the requirements of their users. Beyond such structural, conceptual and decorative features, another parameter heightens the distinction: the builders. Complex architecture was most likely the prerogative of specialists. Their degree of specialisation, their connection with commissioners – i.e. whether they were independent or attached specialists,3 both aspects for which archaeological data are available in Neopalatial Crete4 – are limited to reasoned speculations,5 like many other aspects of the organisation of the building project. Indeed, an adequate record that would offer more detailed insight into the process of construction is missing, although the coexistence of an “architect” (or person in charge) and a large crew of workers is assumed. This plays a significant part in the formal specificities of such complex architecture. Our perception of simple or vernacular architectural projects stands in complete contrast, and “[s]mall house owners probably built their own walls of stone, earth, and mud brick”.6 McEnroe similarly describes vernacular architecture as “generally built by amateurs, often the people who will use it, guided by local conventions,

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2 Darcque 2005, 137. Such denomination, through which Darcque summarises a large dataset about Mycenaean architecture, is equated to the distinction between vernacular vs. polite or innovative architecture generally referred to concerning Minoan architecture. McEnroe 1990; Tzedakis and Chryssoulaki 1997. See also Driessen 1989–1990, 5–6 for a summary.
3 Costin 1989.
4 Shaw 2009, 167–68.
5 Shaw 2009.
using locally available materials and traditional techniques”.

This view is shared by many authors and vernacular architecture is best defined by Rudofsky as an “architecture without architects.” Such a definition does not exclude architectural knowledge, built up by generations of practice and forming part of the “collective memory.” To put it simply, the team in charge appears to be radically different from that involved in complex architecture, in terms of availability and nature.

The approach presented here provides an opportunity to study Minoan Neopalatial architecture through the perspective of the costs generated by its construction. This is called “architectural energetics”, where energy is measured in terms of the time invested in a building project, expressed in hours of work per person. The labour pool required for such a task is considered, and its impact on specific architectural features is stressed. Indeed formal traits of Neopalatial architecture are tightly connected to the nature and availability of the labour pool in charge of their production. This somewhat obvious statement in turn paves the way for social considerations related to the labour pool and the associated social unit.

**Method**

Architectural energetics attempt to objectively quantify the energy invested in a building project. This objective is achieved by estimating the time necessary for the completion of each stage of the building process. These stages consist in the procurement of raw materials, their transport to the building site, their manufacture (when this is relevant) and their assembly into an edifice. For each of these tasks, and considering the relevant materials, standard building costs are applied to the volumes of the edifices selected for application. For the sake of convenience, the hour per person is used here as a measurement unit. Although it does not afford easy representation of the past reality, such a unit leaves more freedom to interpret the results, as disagreements may appear concerning the length of the working day. Indeed, though studies often agree with eight hours as a probable duration which will be used in our interpretation, it can vary greatly due to factors at play as diverse and in some cases as intangible as how strenuous the work was or the enthusiasm generated by the task to be accomplished.

Standard building costs aim to provide the time necessary for the completion of a specific task concerning a given volume of a certain material. They are based on a wide array of sources of which the ones that best fit the materials and techniques of Minoan architecture were selected. The primary dataset was generated from tests comparable to experimental archaeology, generally conducted by anthropologists, and observations of workers and artisans who used techniques that date back to the pre-mechanical era. To better fit the specificities of Minoan architecture, two other types of data were integrated into the method. The first type are specialised works intended for architects and engineers of the late 19th and early 20th centuries, based on both observations and accounts of large building sites working with pre-industrial techniques. The second are reports of national and international institutions supporting agricultural and architectural projects in developing countries. Both significantly enrich the corpus of standard costs, making the quantification most meaningful. Although careful attention is paid to the current archaeological literature, accounts of the large building projects of Greek city-states were not taken into consideration. The available lists of costs are indeed related to the local currency, but also the skill of the craftsman and the socio-economic context of the building project, so that the time invested into the building task is not the sole consideration.

The application of architectural energetics to the study of diverse societies aims to illustrate their institutional complexity, the possibility of hierarchical links between different urban centres, or the evolution of available

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7 McEnroe 1990, 195.
9 Rudofsky 1965.
10 Palyvou 1990, 45.
11 Abrams 1994, 43; Erasmus 1965, 283; Aaberg and Bonsignore 1975, 46.
12 Devolder 2009, 198–276; 2013, 11–47.
14 Pegoretti 1869; Hurst 1886; Rea 1913; DeLaine 1997; Techniques rurales 1971; ECAFE 1957; Abrams 1994, 48; Aaberg and Bonsignore 1975, 46–7.
15 Randall 1953; Stanier 1953; Burford 1963, 1969; Hellmann 1999, to take only a few examples.
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**Table 1** Detailed labour cost estimates of the buildings selected for the application of the method.
humin or material resources responsible for successive accretions to a core building. The present case-study focuses on a selection of Neopalatial buildings and seeks to incorporate a social perspective. In this way, it is hoped to measure the impact of the labour pool on architectural features, but also to explore plausible scenarios in terms of its association with Neopalatial social units.

Application

Standard building costs were applied to a selection of particularly well preserved and documented Neopalatial structures. These are the buildings at Klimataria-Manares, the Achladia “villa”, buildings A and B of the Artisans’ Quarter at Mochlos, building C3 on the islet of Pseira, and the South House, the South East House, the House of the Frescoes, the Royal Villa and the Unexplored Mansion at Knossos. For the sake of precision, the properties of the materials – such as the density of the stones, the loss of material in the process of manufacture, the varying proportions of wall materials, and possible reuse of materials were taken into consideration while applying standard costs to the volumes of the selected buildings. Also, only the building shell was considered. Indeed, even if the standard costs of finishing have been defined as well, the state of preservation of decorative elements can vary greatly, which would introduce a high degree of distortion when comparing different buildings. The results of the application are illustrated in figure 1, and their details, with the time invested in each specific aspect of the construction, appear in table 1.

Labour costs generated by the building process have demonstrated the strong energetic investment into some particular material and techniques that are precisely the result of formal or conceptual elaboration. This is the case of adapting of the local topography to the plan of the building. In some cases, levelling by clearing and filling generated high costs. This is especially true for the structures at Knossos, as well as the villa at Achladia that was partly erected on a thick fill to compensate for the slope of the hill on which it is built. Labour costs objectify the difference between cases where the topography is adapted to the plan of the building (the most “expensive” option), and those where the building is adapted to the landscape. This was stated and reviewed in detail by Fotou. She stressed the dichotomy between a layout allowing for free development of the building’s plan, or adapting the edifice to the building spot, which ends up in markedly distinct formal and conceptual features. Labour costs enhance such a distinction.

Similarly, ashlar induced considerable labour costs, accounting for a large part of the total costs of the most “expensive” structures. Again, this is a significant structural feature of polite architecture, and it reassesses high building costs as a marker of social status. Interestingly, extensive investment into ashlar can be seen at Knossos, that is to say, in the town that was the most likely to offer the “scale of demand” necessary for individuals to develop...
Maud Devoelder

the skills needed and to devote time to the development of specific building techniques. This likely played a part in the implication of the town in the creation and diffusion of polite architecture during the Neopalatial period. Enlargement of the building, both on the available surface and through multiplication of the floors, contributed to raising the costs, simply by increasing the volumes of walls to which standard costs could be applied. High costs were proportional to the enlarged size of the building, while low-cost buildings do not seem to have been enlarged to a point exceeding the needs of their users.

There is nothing surprising in any of these statements, and costs may have simply enhanced the reasons for the polarity between structures, just as an objective observation of formal traits of architecture could. The specific application of the method in question to Minoan architecture aims to provide data that will make it possible, with the help of analogies from other societies, to explore the size of the social unit using vernacular architecture. Although a more subtle categorisation should be favored, only the buildings whose construction necessitated less than 10,000 person-hours are considered in the discussion (fig. 1).

**Minoan Vernacular Architecture and the Social Unit**

Interpretation of the results of the application of “architectural energetics” to low-cost, small-scale buildings is based on two principles stemming from analogies with other societies. They concern both the duration of the construction project and the population that was possibly involved in the process. On the basis of analogies with Greek Antiquity, modern Central America and Western Africa, the duration of a building project is estimated at two to five months – three months seeming to be the most common length of time. Construction is there described as

![Fig. 1](image)

**Fig. 1** Estimation of the total costs (all phases included), expressed in hour per person, of the buildings selected for the application of the standard costs.

26 Shaw 2009, 169. Similar comments for a later period in Greece, with Burford who stressed the marked difference in the organisation of building projects between city-states according to whether or not the number of inhabitants (the scale of demand) could support a class of specialists, Burford 1963, 27–8.
28 McEnroe 1982; Darcque 2005, 139–43, fig. 33.
29 “A wide range of ethnographies … indicates that within agrarian societies, construction is predominantly if not exclusively scheduled for the agricultural off-season (excluding of course situations requiring immediate repair). Within the Copan Valley today, this equates to a period of approximately 120 days … This figure, however, is too high, since the four operations within the overall process of construction are to some degree sequential; that is, there is a necessary temporal delay between component operations. Thus I will reduce the duration of work to a 60-day period for most of the tasks in construction”, Abrams 1987, 490. On the basis of interviews of artisans from Copan, Honduras, the same author expands his estimates: “First, construction in Copan is generally undertaken during the dry season, from January to May. The reasons are rather predictable: dry conditions provide for dry materials and better working conditions, and the agricultural off-season provides the necessary time for scheduling house construction”, Abrams 1994, 43. For the Batammaliba (Togo and Benin): “House construction is generally undertaken each year between the dry season months of December and February”, Blier 1987, 19. Preference for the dry-season is also corroborated by ancient Greek sources, as “… a fourth-century record from Eleusis shows that heavy transport from the quarries, in one instance at least, was done during July and August, the driest time of the year”, Burford 1963, 33.
Manpower and Neopalatial Architecture

an un-specialised activity where the labour pool must also attend to its own affairs, for the most part agricultural, as was very likely the case in the ancient Aegean. The project occurred in most cases during the agricultural off-season, which also corresponds to the period that offers dry raw materials and better working conditions. Moreover, it appears that only 20 to 33% of a population is likely to take part in building projects, namely adult males, or adult males helped by some of the adult females and by the oldest male teenagers.

Considering a three-month project, with working days of eight hours, the estimated labour pool for each of the structures which may be characterised as low-cost – considering in some cases several hypotheses based on different reconstruction proposals – is indicated in black in the following graph (fig. 2).

Relying on the maximum suggested implication of 33% of the population, the size of the social unit correlated to the labour pool is expressed in grey in figure 2. Such numbers make it possible to search for a pattern which might corroborate the scenario of the involvement of the inhabitants in the construction of their own habitat. This necessitates an estimation of the size of the Minoan residential unit.

Reviewing the data from 18 societies, Naroll defined an average living surface of 10 m² per inhabitant. Although such an estimate has been heavily criticised and alternatives have been proposed, Naroll’s standards are still regularly used as a basis for calculations. Interestingly enough, studies concerned with pre-industrial Crete give an average living surface of between 9 m² and 13 m² per inhabitant, which matches Naroll’s estimate. Considering this statement and the living surface of the buildings, the estimated numbers of individuals who may have occupied these structures are indicated in white in figure 3. Stressing the caveats of Naroll’s estimates, Whitelaw insisted on a wide variety of factors at play in the elaboration of architecture, notably in terms of dimensions. On the basis of the small and standardised size of the houses in the town of Gournia, he suggested that the Neopalatial social structure was based on the nuclear family. An average of five to six individuals should be considered, along his lines, as indicated in black on the same graph in figure 3.

In three cases there is a marked difference between the potential size of the residential unit and the number of individuals correlated to the estimated labour pool. These are building C3 on the islet of Mochlos, and buildings AB and AD Centre (1) at Pseira. Apart from these, Naroll’s estimates are in the range of the numbers of individuals correlated to the estimated labour pool. They are in almost all cases slightly under it, which fits the scenario of low-cost buildings erected by their users with some external help. Such a scenario functions less well if one considers

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30 Halstead and Jones 1989; Osborne 1996, 51.
31 We cannot rule out that children who were excluded participated in some of the architectural tasks, such as the collection of water or grasses, for brick-making for example, but the labour costs generated by such tasks appeared to be so insignificant that these were excluded, see Abrams 1994, 52.
32 Naroll 1962.
33 Cook and Heizer 1968; LeBlanc 1971; Castleberry 1974; Clarke 1974; Sumner 1979; Kolb 1985; Brown 1987 and Cameron 1999, summarised by Christakis 2008, 35. These offer a very wide array for the surface area per inhabitant, between 6 m² and 50 m², but up to 100 m² per inhabitant.
34 Allbaugh 1953, 89–90.
the presence in those structures of small nuclear units, which would contribute only two individuals to the labour pool (i.e. 33% of six individuals), meaning that the building projects relied heavily on externals. One is tempted to agree with the idea of a flexible size of the social unit, in which case these estimates support the involvement of the inhabitants in the construction of their own houses.

Of course, standard building costs providing a basis for architectural energetics can always be refined. Similarly, estimates of residential units are subject to some elusive factors. Because of such caveats, the application of architectural energetics cannot be proved clearly and conclusively. However, it should be recognised that it supports a scenario otherwise mainly based on analogies, commonsense and the formal properties of the buildings. The most likely picture would be that relatives on site provided help to inhabitants when needed, so that the project could be achieved on time. Such a scenario suggests that the builders were not specialists and that they were tied to a short time schedule, since they still needed to fulfill the tasks required to ensure their living. Reduced availability limited construction to more immediate needs. The use of local materials, simple planning and traditional techniques is therefore tightly correlated to a lack of specialisation and limited availability of the workforce.

36 “Small house owners probably built their own walls of stone, earth, and mud brick, but sometimes they no doubt required help, perhaps from neighbors or family members, to gather the materials necessary, to position ceiling beams or window frames, or to deliver and drag into place a heavy threshold block for a front door”, Shaw 2009, 167.
Architectural knowledge was present and, as suggested by Palyvou, it formed part of the “collective memory” transmitted through generations. Nevertheless, the excess (formal and energetic) which characterises an “upper” architectural category was not afforded to builders of simpler structures.

Indeed, considering the same parameters as the ones applied to low-cost structures related to the duration of the building project and the population involved, such a scenario would be untenable for the more expensive, Knossian structures. In those cases, a project of 90 days of 8 working hours would imply such manpower as indicated in black in the graph in figure 4.

Considering again a maximum involvement of the population (33 %), the number of individuals likely to have provided the necessary workforce is indicated in grey in the same graph.

The population correlated to the labour pool involved in the building project generally far outnumbers the number of inhabitants that these buildings could have sheltered. That is, considering Naroll’s estimates of 10 m² per individuals, 25 individuals for the House of the Frescoes (249 m²), 45 individuals for the South East House (457 m²), 40 individuals for the Royal Villa (402 m²), 54 individuals for the Unexplored Mansion (540 m²) and 47 individuals for the South House (472 m²). It is therefore necessary to invoke an alternative interpretation of the data: in such cases, the building project must have relied on an external workforce.

The relation between high costs, reliance on an external workforce and conceptual elaboration of the building (especially in the planning and use of ashlar) suggests the involvement of specialised craftsmen, whether they formed only a part of the labour pool or the whole of it. Looking backwards, such a specialisation is correlated to the availability of the workforce, as increased skill results from increased time spent by the craftsman in producing and in mastering production techniques.

High-cost building projects indeed necessitated a labour pool different both in nature and availability, and relied heavily on the access of the commissioners to human and material resources. Those include notably the agricultural resources necessary for supporting the workforce during long-term projects.

**Conclusion**

Architectural energetics offer a model of the construction process, which provides in turn an alternative approach to past reality by producing a vivid scenario for the production of the built environment. Because of this modelling, however, relying on parameters such as standard costs that can always be refined impedes the leap towards more nuanced interpretation. However, the methodology provides a useful comparative tool for studying the production of the built environment, while placing manpower at the centre of the process. Indeed, an estimation of the costs highlighted how the workforce, limited in availability and not specialised, was to a large part responsible for specific choices related to materials and techniques. This statement was exploited here in order to explore the size of the residential unit in vernacular architecture, and from there, to suggest that social units were flexible. But as far as the potential of the method is concerned, wider perspectives could be considered. For instance, building costs can be interpreted within a wider social and historic context. It would imply measuring the impact of large-scale building programmes on the population, or considering the relationship between high energy expenditure and a specific historical context, inasmuch as massive energy investment into architecture is highly dependent on human and material resources.

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37 Palyvou 1990, 45.
38 Estimated living surfaces, i.e. off-walls.
Bibliography


Be(hav)ing “Minoan”

Negotiating Life and Death Through Practice and Performance
Recreating the Past

Using Tholos Tombs in Protopalatial Mesara*

Ilaria Caloi

New results from the investigations I carried out during the last few years on ceramic material coming from one of the most important tholos tombs built in Protopalatial times (MM IB–MM IIB), namely the main tomb of Kamilari cemetery, have been crucial in understanding the chronology and function of those Mesara tholos tombs, which have yielded MM I–II ceramic. Despite the fact that it is widely agreed that the phenomenon of the Mesara tholos tombs continued from Prepalatial through Protopalatial times, several significant questions have so far remained unanswered: Which tombs were built in the Protopalatial period? Were these tombs used or re-used in the Protopalatial period for burials or for non-funerary rituals, which were mainly connected to ancestor worship? This paper aims at addressing these questions, focusing on ritual aspects of Protopalatial tholos tombs.

It is generally assumed that in the Protopalatial period many tholos tombs of the Mesara plain (South-Central Crete) continue to be used following the same mortuary practices and the same funerary rituals attested in the previous Prepalatial period. Nevertheless, material manifestations of these burial and cult places varied regionally and chronologically.¹ In this paper, I will try to answer some questions concerning the use of the tholos tombs in the Protopalatial period, attempting to discern changes in mortuary practices, funerary feastings and ancestor worship from the Prepalatial to the Protopalatial tholos tomb cemeteries. While considering these comparisons and differences, I will follow a chronological order, beginning from MM IB through the end of MM IIB.

Since I have recently reviewed the Protopalatial ceramic material (MM IB–MM IIB) from the cemetery of Kamilari after more than 50 years have elapsed since the first 1958 excavation by Doro Levi,² I would like to focus on the archaeological evidence obtained from this cemetery in order to consider more effectively other tholos tomb cemeteries in use in the Protopalatial phases. Indeed, the first period of use of this important funerary complex is the Protopalatial period, then it was used until LM IIIA2, with a partial reoccupation in the Geometric period.³

Without dwelling upon the limits of the study of mortuary practices attested in the Mesara tholos tombs, Kamilari included, I will just mention that these limits are mostly connected to the nature themselves of these tombs, that are collective tombs, used over long periods of time, cleared periodically, looted in modern times, not well excavated, and poorly documented.⁴

The MM IB Phase: Kamilari in the Funerary Landscape of the Mesara Plain

By analyzing the ceramic material retrieved from the complex and by revising the excavation reports, it may be construed that the cemetery of Kamilari was constructed in MM IB. In this phase, Kamilari consists of a circular room, antechamber α and room β, as well as of a courtyard to the north, bounded at the northwestern part by a

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¹ I would like to thank Filippo Carinci and Vincenzo La Rosa † for the opportunity they gave me to study the Protopalatial phases of the Kamilari cemetery, and in particular Filippo Carinci for having discussed many aspects of this paper with me. A special thanks to the organizers of the conference at Heidelberg, and especially to Diamantis Panagiotopoulos. I am also grateful to the audience and especially to Jan Driessen, Yannis Hamilakis, Eleni Hatzaki, Aleydis Van de Moortel and Peter Warren.
² Caloi 2009a; see also Caloi 2011a. My work on the use of the funerary complex in the Protopalatial period is part of a major programme of revision of Levi’s excavation at Kamilari, which aims at a complete edition on the cemetery. The successive period of use of the cemetery, that is from the MM III phase to the Mycenaean period, is the topic of L. Girella, while other scholars are involved in the study of the skeletal material (S. Triantaphyllou), of the chemical and petrographic analysis of the pottery (P. Day), as well as of specific finds, such as miniature models (D. Novaro), stone vessels (O. Palio), and seals (M. Anastasiadou).
⁴ For the re-use of the Kamilari cemetery in the Geometric period, see Novaro 2004, 181–97.
⁵ On the topic, see Branigan 1970, 11–5.
Recreating the Past

From the courtyard there is an entrance to the antechamber α: this passage has been in use from MM IB to the end of MM IIB, and it appears to have been closed in MM III, when access to the cemetery was moved to the east. The southeastern area of the cemetery seems not to be occupied in MM IB.

At the time of its foundation, the Kamilari cemetery, however, is limited in its use: only 17 vases were found dating to MM IB, which are mostly pouring vessels, especially jugs. Inside the circular room only two entire beaked jugs were recovered, while the rest of the pottery comprises of a few sherds of barbotine jugs and of two-handled jars. A similar pattern can be observed in the antechamber α, where, among the diagnostic jars, only sherds of pouring and containing vessels were retrieved.

The majority of MM IB pottery was found outside the _tholos_ in the courtyard. Complete vessels from the courtyard include mostly pouring vessels, such as small and large beaked jugs. Among the diagnostic material, there are jugs as well, and a few sherds of drinking vessels. Moreover, it has been observed that most of MM IB complete vases have been found in a specific area of the courtyard located between the passage to the antechamber α and the _peribolos_ wall (fig. 2). As the material found here consists mainly of entire vases and lies in secondary deposition, I agree with Levi in interpreting this material as vessels used during funerary rituals which were likely performed here, then placed inside the circular room and finally moved out during the various cleanings of the _tholos_. In fact, the most ancient ceramic material of the cemetery was found outside the _tholos_, while inside only few MM IB vases have been recovered.

Since many complete vessels dating from MM IB to MM IIB were found here, the evidence suggests that this area continued to be used for a long time for the disposal of ceramic material from the circular room (fig. 2). However, although there is an area for the removal of the pottery, in MM IB no rooms were found for the specific clearance of skeletal material. It is likely that for the first and limited period of use human bones and grave goods were moved toward the periphery of the _tholos_ interior, and mostly in the western sector of the funerary room, that is the farthest area from the entrance. Indeed, the two aforementioned MM IB beaked jugs retrieved from the funerary room were found clearly placed in the western sector, together with some skeletal remains. A similar pattern is attested in several Prepalatial _tholos_ tombs, such as in tombs B and E of Koumasa, in tomb B of Platanos, and in tomb A of Vorou.

Summing up, in MM IB the Kamilari cemetery is really limited in its use, and there is no clear evidence for the typical Early Prepalatial two-stage process involving the primary burial of a corpse and the secondary treatment of the bones. Therefore, no clear evidence seems to be attested for ancestor worship either, whereas from MM IIB this kind of evidence becomes much more visible (see infra).

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6 Caloi 2011a, 99, fig. 1.
7 Caloi 2009a.
8 Caloi 2011a, pls. XXXIIa–b.
10 Caloi 2009a.
11 For Koumasa and Platanos, see Xanthoudides 1924, 7, 92. In particular, in _tholos_ tomb E the skeletal material was retrieved from the western sector of the funerary room, covered with earth.
12 Marinatos 1931, 146. At Vorou A many skulls were found heaped in the western part of the funerary room.
13 Caloi 2009a; on the typical two-stage process, see Branigan 1993, 57–67.
Although already in MM IB outside the *tholos* a delimited space existed with *peribolos* wall; nevertheless, from the quantity and the distribution of the ceramic material, it seems that in MM IB the area employed for the performance of funerary rituals is restricted to few people and limited to the courtyard and to the antechamber α. In addition, even if it is generally assumed that in Prepalatial as well as Protopalatial *tholos* tombs mortuary feastings are based on drink and food consumption, nevertheless in MM IB at Kamilari, as well as in other cemeteries of the Mesara plain, the evidence is quite poor. At Kamilari no food remains are attested, although this category of organic residues has been often ignored by the excavators. In any case, from the Kamilari cemetery no evidence obtained from pottery and other implements yields any association with food and drink consumption, since no cooking pots, bowls or drinking vessels were found, while most of the material retrieved from inside and outside the tomb consists of pouring vessels. Therefore, from the presence of jugs only, it may be inferred that in MM IB the main mortuary ritual was based mainly on pouring actions and/or libations, although it is well known that pouring vessels, such as jugs and *rhyta*, are not necessarily evidence for libation on their own. As reasonably pointed out by Davis, such vessels become stronger evidence for libation only if associated with other vessels that could have served as receptacles. Therefore, the lack of drinking pots does not eliminate that drink consumption took place at the cemetery of Kamilari in MM IB. In fact, the special assemblage consisting of only pouring vessels could signify that during funerary (or non-funerary) ceremonies people took drinking pots with them as they departed from the cemeteries, leaving only pouring vessels.

The MM IB pattern visible at Kamilari is really similar to the funerary evidence attested in the nearby cemetery of Hagia Triada, that is between Kamilari and Phaistos. Contrary to the common pattern seen in most Mesara *tholos* tombs, in the MM IB phase at Hagia Triada there is an increase in the use of the cemetery. So far, Hagia Triada is the only cemetery showing the same picture observed at Kamilari, namely the foundation of a new *tholos* tomb in MM IB, that is *tholos* B. Therefore, from the archaeological evidence it appears that *tholos* A continues to be used for burials from EM II to MM II. To the south there are also some annexes known as *Camerette*, which were constructed in MM IA and remained in use until MM IIA with some architectural modifications and additions. Since no burials were found inside, but only ceramic assemblages, they appear to have served as repositories for pottery to be used during ritual performances.

As Carinci has rightly pointed out, at Hagia Triada there was a distinct shift in funerary rituals from MM IA to MM IB. The change was from practices based on drink and food consumption, as attested to by the typical set for drinking, consisting of one shallow bowl, one jug and four handleless cups, and involving large numbers of people, to mortuary feastings likely based on libation rituals and involving a limited number of persons. In MM IA a massive use of *tholos* A and of its annexes to the east occurred in combination with intense ceremonial activity in the area of the so called *Camerette*. Conversely, in MM IB the ritual funerary seems to be limited to a few

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14 Davis 2008, 47.
15 Cultraro 2003, 323; see also Carinci 2004, 33–4.
16 On the *tholos* A of Hagia Triada, see Banti 1931, Cultraro 2003 and Carinci 2004; on the South *Camerette*, see Cultraro 2000.
19 As pointed out by Carinci (2004, 33) the drinking set attested in MM IA at the cemetery of Hagia Triada is similar to that found at Hagia Kyriaki, consisting of one jug and three conical cups (Branigan 1993, 78).
20 Cultraro 2000.
persons, not necessarily involving food and drink consumption. Moreover, the focus of the new funerary rituals moved to the area of the Camerette. Indeed, the best funerary evidence of Hagia Triada in MM IB is presented by the large amounts of vessels found in the Camerette, where the commonest shapes are one-handled and three-handled jugs, quite elaborate in decoration, since they present polychromy in combination with barbotine work. The high number of jugs, as well as the lack of drinking pots in MM IB at Hagia Triada resembles the contemporary pattern already observed at Kamilari.

Two interesting parallels are provided by another funerary context, that is, the cemetery of Koumasa, and by a cult place, such as the Kamares Cave. In the first example, the MM IB–MM IIA vessels found outside the tombs include only pouring vessels. They consist of one-handled and three handled jugs, all painted in polychromy in association with barbotine decoration. They can be interpreted as evidence for non-funerary rituals in memory of the dead after the last use of the cemetery for burials, that is, in MM IA. The second parallel is offered by the Kamares Cave, where among the Protopalatial pottery, pouring vessels, which are mostly bridge-spouted jars, jugs and few rhyta, outnumber the drinking pots. The proportion of cups to pouring vessels is almost of 1:11, as recently reported by Van de Moortel. As already pointed out by several scholars, it would be likely that in the Mesara Protopalatial period, the ritual performances, both in funerary and non-funerary occasions, were focused on pouring rather than on drinking actions.

As far as the contradictory character of Kamilari and Hagia Triada is concerned, where the construction of a monumental tholos tomb does not correspond to a heavy use of the mortuary area (i.e. the circular funerary room), this scenario may imply that the two tholos tombs were constructed in order to contrast the emergence of the palatial centre of Phaistos. It is well-known that the palace of Phaistos, and especially the monumental three-storey South-West building, with its monumental and innovative orthostate façade, was constructed precisely in MM IB. The aforementioned ceramic evidence from Kamilari and Hagia Triada corroborates this hypothesis, as it reveals that the funerary feasting attested in both cemeteries in MM IB is completely different from the ceremonial feasting performed at the Phaistos palace, which is mostly based on drink and food consumption.

The MM II Phase: Kamilari in the Funerary Landscape of the Mesara Plain

In MM II many cemeteries of the Mesara plain have completely gone out of use, the only ones which continue to be used are Hagia Triada, Apesokari, Porti and Vorou. Hagia Triada seems to be occupied in a limited way, with very few burials, while Porti and Vorou continue to be used until the end of MM IIB and LM respectively, showing complex and differentiated mortuary burials. Kamilari appears to be the only Mesara tholos tomb cemetery which shows a marked increase in its use in MM IIB, followed by a peak in the MM III phase.

From MM IIA the funerary evidence at Kamilari has revealed the first changes from MM IB. First of all, the quantity and the distribution of the pottery suggest an increase in the use of the cemetery, as well as an expansion to the east of the occupation area, likely involved in new ritual activities. Second, both inside and outside the circular tomb, in MM IIA an increase of drinking vessels, which are mostly handleless and carinated cups, together with the appearance of a new pouring vessel, the spouted jar, can be noted. The latter is well attested at Phaistos.

22 Cultraro 2000, 325, pl. 2a.
23 Cultraro 2000, 325, pl. 2b.
24 Xanthoudides 1924, pl. V.
25 Xanthoudides 1924, 41–3; see also Soles 1992.
28 Caloi (forthcoming a,b).
29 Carinci and La Rosa 2007.
31 The study of the Apesokari cemetery is an ongoing one by G. Floora and G. Vavouranakis.
32 For the cemetery of Porti, see Xanthoudides 1924; for that of Vorou, see Marinatos 1931.
33 For a detailed overview of the changes from MM IB to MM IIA in the Kamilari cemetery, see Caloi 2011a.
from MM IB, but begins to broaden outside the palatial core only in MM II, when the common type is the bridge-spouted jar. The new typology of vases attested from MM IIA seems to suggest the occurrence of new ritual forms, including mainly drink consumption.

Nevertheless, at Kamilari, the strongest sign of changes both in mortuary and in ritual practices occurred in MM IIB, when, for the first time, clear evidence of the typical Early Prepalatial two-stage process is attested, including primary and secondary deposits. However, it is relevant to observe that at Kamilari no larnakes and no pithoi were used for secondary deposits, whereas in all Protopalatial cemeteries of the Mesara plain (Apesokari, Vorou, Porti), as well as of the northeastern area of Crete (Archanes, Sissi), these containers are in use.35

The MM IIB phase at Kamilari is characterized by:

1. a marked increase in the use of the cemetery, attested by the foundation of a new tholos tomb, the Mylona Lakko tomb,36 by the occurrence of large amounts of pottery both inside and outside the tholos, and by the expansion of occupied areas towards the east;
2. new disposal areas, meaning two ossuaries for long bones and skulls (rooms β and δ), and new rituals in association with the relocation of the skeletal material;
3. the equipment for a slab altar in the courtyard (fig. 3), in front of room β.

For MM IIB the evidence suggests a marked spatial and functional differentiation of the areas outside the tomb. From the typology and the distribution of the ceramic material it may be inferred that there were areas used mostly for mortuary feastings and others mainly for non-funerary activities, namely not related to specific funerals, but likely connected to the worship of dead ancestors.

The high concentration of pottery found in the courtyard suggests the use of the northwestern part of the court for the performances of rituals involving a greater number of people than in previous phases and, for the most part, the occurrence of new forms of consumptions. In the courtyard 98 cups were found along with 55 pouring vessels from a total of 168 pieces. Few cooking pots were retrieved, making a preference for drinking rather than eating more probable. The best represented vessels among the pouring vessels are jugs, together with bridge-spouted and side-spouted jars, while among the drinking vessels, there are fine carinated and straight-sided cups, but mostly undecorated handleless cups.37

It is noteworthy to confirm that from MM II onwards the introduction of shapes occurred that are typical of the near Phaistos palace, namely spouted jars and different kinds of cups, such as handleless and fine carinated. Indeed, at Phaistos palace, from MM IB to MM IIB, forms of consumption are attested by the recurrence of groups of pouring and drinking vessels, suitable for public dining or feasting. Among the pouring vessels, the most common are the bridge-spouted jars, while among the drinking pots there are many fine ware, but mostly handleless cups.38 The adoption at Kamilari of ceremonial sets used at Phaistos may signify a social strategy of imitation and emulation of ritual performances acted

34 On the spread of the spouted jar in MM IB, see Caloi 2007, 127–29.
35 On the use of the containers for secondary depositions, see Soles 1992. On the cemetery of Archanes, see Maggidis 1994, while on that of Sissi-Bouffo, see Crevecoeur and Schmitt 2009 and Schoep 2009.
37 Caloi 2009a, 2011a.
38 Public dining or feasting may be inferred by the presence of assemblages found both in the South-quarter of the palace (Rooms IL, XXVII–XXVIII, LIII–LV) and in the external courts, even if in different quantities and revealing different kinds of feastings, see Militello 2012, 261–63; Carinci 2011; Caloi 2013.
Recreating the Past

by palatial elites in the communal area of the Phaistos palace. Therefore, the adoption of consumption forms from a palatial context could reflect new needs of the Kamilari community to evoke elite feastings, in order to display its membership in a much wider elite community.

During the MM IIB phase, the Kamilari cemetery shows a new emphasis upon a secondary treatment, which can be interpreted as a new emphasis upon the process of remembering/worshipping dead ancestors. In MM IIB at Kamilari two areas for disposal of skeletal materials are attested, namely rooms β and δ. In fact, room β was transformed in function compared to its use in previous phases: an elevated number of long bones was found together with MM IIB drinking pots, including many handleless cups, generally complete, several stone vessels, mostly in the shape of a cylindrical pyxis or bird’s nest, and one miniature teapot.39

The lack of stratigraphy makes it difficult to understand if room δ was constructed in MM IIB or in early MM III, nevertheless from MM IIB entire vases of the same type as those attested in room β, namely handleless cups and miniature pouring vessels were also found in room δ.

At Kamilari, the aforementioned vessels found in the ossuaries are completely different in typology and function from vases retrieved from the heap area (fig. 2), as well as from the scattered material of the courtyard. It may be inferred that during the secondary depositions rituals took place that were different from those performed during the first stage of funerary practices.

As Branigan wrote in 1998: “How such bones as were removed from the tomb were subsequently manipulated in open, communal ritual is largely unknown.”40 It is generally ascertained that together with the relocation of skulls or long bones ritual practices occurred in memory of the dead, already transformed in ancestors.41 The relocation of the skulls, associated with the deposition of grave goods, was interpreted by Soles as the most striking evidence of ancestor worship.42 In this sense, it is relevant to point out that the vessels found in the Kamilari ossuaries find close comparisons with those relocated in the secondary depositions of some Mesara *tholos* tombs, as well as of some cemeteries of the northeastern Crete. In fact, the goods associated with the secondary depositions (mostly skulls) are usually few, placed upside down, and they often comprise stone vessels, handleless cups and miniature vessels, mostly juglets.

The most important examples are offered by the *tholos* tombs of Lebena Papoura I and Yerokambos II,43 where the ossuaries have revealed early MM IB secondary depositions. At Lebena Papoura I, the entrance to the tomb, which was transformed into an ossuary in MM IB,44 has revealed long bones and nine skulls together with one one-handled cup, four handleless cups and two miniature juglets.45 At Yerokambos in the early MM IB phase the two *tholos* tombs appear to have been blocked by the construction of room A, which has revealed some human bones and several handleless cups. Some of the latter can be actually dated to MM IB46 as they find strong parallels with some MM IB Phaistian examples.47

In northeastern Crete, a number of house-tombs has offered evidence for secondary offerings placed by or on top of retained skulls included mostly inverted cups.48 They are documented in several cases, such as at Gournes, Gournia II and Palaikastro VII.49 The best parallels come from Archana, especially from Tomb 7 and Tomb Gamma, where one inverted cup was found respectively on the removed skull50 and close to a relocated skull,51 as well as Burial Building 19.52 Here, the relocation of skulls and bones occurred in *pithoi* and *larnakes* only in the upper strata, that means layers 3–4 corresponding to MM IB–MM IIA, whereas in the lower ones the skeletal remains

39 Caloi 2011a, pl. XXXIVa.
40 Branigan 1999b, 25.
42 On the funerary complex of Lebena, see Alexiou and Warren 2004.
43 Alexiou and Warren 2004, fig. 5A.
44 Alexiou and Warren 2004, fig. 9, nn. 119–27.
45 Alexiou and Warren 2004, nn. 1–4, 7, 11 fig. 42, pl. 140D.
46 Caloi 2009b, 411, fig. 13 r, t, x (Phaistian phase B).
47 Caloi 2009b, 411, fig. 13 r, t, x (Phaistian phase B).
48 Maggidis 1994, 73.
50 Sakellarakis 1997, 208, 255.
51 Papadatos 2005, 60.
52 Maggidis 1994, 94–5.
were laid on the ground. Maggidis also reported that together with skulls and bones few vases were also found, mostly inverted on the skulls. It may be inferred that in the Protopalatial period the rituals performed during the secondary treatments, and interpreted as forms of ancestor worship, occurred following similar practices.

Moreover, it is worth pointing out that at Kamilari the assemblages of vases found in the ossuaries are of the same typology of those found in the northeastern part of the courtyard, and especially: 1) on the altar; 2) near the altar, on the ground; 3) along the peribolos wall. In fact, the vases found on the altar, and recently identified, comprise of six inverted vessels, which are one handleless cup and five stone vessels in the shape of the bird’s nest (fig. 3). The assemblages found on the ground, both near the altar and along the peribolos wall, consist of three to five vases, including stone vessels, handleless cups, fine miniature juglets or cups (carinated or conical). They were found inverted as well (fig. 4).

It may be inferred that all these small vessel assemblages are the result of rituals for ancestor worship, and that the latter occurred on different occasions, that are first during the second stage of the mortuary practices, when the dead need to be “killed” as a social person and transformed into an ancestor; second, after the funerals, as non-funerary rituals performed in memory of the dead ancestor. The evidence offered by Kamilari outside the tomb could shed new light on the rituals occurring in memory of the dead ancestor, at least in the Protopalatial period. In fact, there are many factors which suggest the performance of a “virtual” and symbolic food and drink consumption, such as the typology, the association and the position of the vessels found on the altar and on the ground. First of all, stone and miniature vessels are themselves symbolic items. Indeed, stone vessels are usually interpreted as small containers for token food and token drink, both in funerary and in domestic/palatial contexts, while miniature vessels have been recently interpreted by Knappett as a means to increase the significance, to give dramaturgical effect to the rituals. In fact, when miniature vessels lose their functionality because of their dimensions, at the same time they increase their own symbolic value, since they evoke something else. Therefore, since the miniature vessels of Kamilari represent with extreme fidelity the canonical vases generally used for feastings, which are juglets, fine straight-sided and carinated cups, they could be interpreted as a means to call to mind the feastings which occurred during the funerals. Finally, the inverted position of the vessels is relevant too, since, using the words of Åström, they represent the “memorial of the act”. It could be suggested that this act is properly the feasting performed during the funerals. Such evidence leads one to think that these small assemblages of symbolic vases found on the altar and on the ground could be used in a virtual and symbolic way to evoke food and drink consumption which occurred during the feasting performed on the occasion of funerals. If this hypothesis is correct, it may be inferred that the MM IIB altar of Kamilari was the focus of rituals mainly connected to ancestor worship, rather than to specific funerary performances.

53 Maggidis 1994, 70–1, 143, table K.
54 See the previous note.
55 Levi 1962, 80, fig. 105.
56 Caloi 2009b, 208, 249–50.
58 On the use and meaning of stone vessels, see Palio 2004, 18–20; see also Maggidis 1994, 70–2, and Murphy 1998, 37–8.
59 Knappett 2012.
60 Åström 1987, 13–4.
These episodes of ancestor worship strictly associated with an altar are attested in other Protopalatial cemeteries, such as Apesokari, in the Mesara plain, as well as at Chrysolakkos and Archanes, in northeastern Crete. In particular, at Apesokari many stone vessels have been identified exactly in room G, which is equipped with a fix altar, and therefore the latter room has been interpreted as connected to the cult of the dead. In the MM IA–MM IIA Burial Building 19 of Archanes, few vases, including one juglet and one goblet, were found near a platform located outside the funerary building and interpreted as an altar.

I wonder whether all these fixed altars were used simply for offerings to the dead, as suggested by many scholars, or whether the vessels found on them or in their proximity have been the result of a virtual food and drink consumption in memory of the dead ancestors, as proposed for Kamilari.

The Kamilari cemetery is an exceptional case in the landscape of the Mesara plain, as well as of all of Crete, and its pattern is quite difficult to explain in a satisfying way. Nevertheless, I would like to focus my attention on those relevant aspects of the funerary and non-funerary evidence of Kamilari which make it different from the other contemporary cemeteries.

In cemeteries in use in the Protopalatial period, there appears to be a mixing of old and new trends in funerary practices, reinforcing the view that burial places are not as clearly defined as in previous phases, that is, in the Prepalatial period. For example, in many cemeteries in MM IB the employment of *pithoi* and *larnakes* has changed from MM IA, by becoming more various and differentiated. Indeed from MM IB the containers have begun to be used not only for secondary depositions, but also for primary depositions, and to be deposited in pits and in existing tombs, as attested in northeastern Crete, or even left out in the open as at Vorou and Porti. Conversely, at Kamilari the absence of *pithoi* and *larnakes* echo a continuous use of the aforementioned two-stage process typical of the Early Prepalatial period. Therefore, following this “traditional” trend, the Kamilari cemetery seems to “rewrite exactly the past”. In the funerary contexts, the lack of emphasis upon distinction by means of material signs, such as personal containers for skulls and long bones, has been generally interpreted as a lack of individualization. Therefore, this pattern could signify that the main organizing principle of the living community who buried their dead at Kamilari during the Protopalatial period was kinship rather than wealth or social status. Indeed, since the secondary deposition has to be interpreted as a collective act performed by the community, it may be inferred that the ritual activities which accompanied it at Kamilari were mainly intended to affirm ancestral ties.

Moreover, it is generally assumed that in the Protopalatial period and mostly in MM IIB there is a general decrease in funerary visibility, and that, in concomitance with the peak of the palaces, the display of status and wealth has become much more visible in the realm of the living, namely in palatial courts and in the peak sanctuaries. Again, Kamilari is instead one of the few cemeteries which in MM IIB show not only a strong architectural visibility and monumentality as seen by the construction of a new *tholos* tomb, that is, the Mylona Lakko, but also a new increase in its use, attested by the construction of two ossuaries and by an increase in pottery. The MM IIB phase also sees a new accent on dead ancestor worship testified by the equipment of a fixed altar, as well as by several ceramic assemblages recalling those found on the altar and in the ossuaries. If the scenario of the MM IB Kamilari cemetery seems to imply a reaction against the emergence of the First palace of Phaistos (see supra), on the contrary, the new scenario of MM IIB at Kamilari appears to be integrated into the programme of monumentalisation attested at Phaistos and in its surrounding area since MM IIA.

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61 See also Soles 2010, 336.
62 Schörgendorfer 1951, 13,18–9.
63 Flouda 2011.
64 Maggidis 1995.
65 Maggidis 1995, 570, fig. 6, pl. VII.
67 Caloi 2011b.
68 On the topic, see the recent paper by Driessen (2010, 113–15).
69 Caloi (forthcoming a).
Bibliography


Recreating the Past


Ilaria Caloi


Recreating the Past


The Body Brand and Minoan Zonation*

Anna Simandiraki-Grimshaw

The human body abounds in the Minoan excavation record, from seals to frescoes to figurines to human remains. Nevertheless, it is usually approached mainly as an art object or as a collection of bones, and occupies the interpretational margins of Minoan archaeology, with the exception of its role in religion or society. Few luminous exceptions have attempted to go beyond such constraints, into thematic territories such as gender and embodiment.

This paper, based on the author’s current research, advocates an integrated approach to the human body in the Cretan Bronze Age. According to this, the combination of diverse somatic datasets can reveal very interesting and hitherto neglected social and other patterns. One such pattern, presented here, regards the role of the human body in the construction of geographical and perhaps social zones. In effect, a new way of looking at the human body in Minoan Crete is proposed by using specific examples.

Introduction

Research on the human body beyond its medical potential has progressively come into focus in the Humanities and Social Sciences in the later 20th and early 21st c. CE. The constellation of debates on the human body is already rich and has covered several topics. These have included gender,1 osteoarchaeology,2 identity,3 ethnography,4 visuality,5 the body in space,6 social conditioning and discipline,7 relativity of perception,8 sensoriality,9 fragmentation,10 religion,11 as well as wider approaches.12 Such already substantial and promising research has opened new horizons beyond previously established Western-centric, Cartesian bodily dualisms. However, interpretation in Aegean Bronze Age and Minoan archaeology largely continues to underprivilege the human body. Luminous exceptions paving the way for joining wider debates of corporeality, embodiment and agency include the work of e.g. Wedde,13 Morris,14 Morris and Peatfield,15 Goodison,16 Malafouris17 and Voutsaki18 on somatic configuration, transience and agency; Rehak,19 Alberti,20 Mina21 and Hitchcock22 on gender; Adams23 and Preston24 on...

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1 E.g. Cooe 1994.
2 E.g. Sofaer 2006.
4 E.g. Csordas 1993.
6 E.g. Turnbull 2002.
7 E.g. Bourdieu 2005; Fraser 2005.
8 E.g. Merleau-Ponty 2006.
9 Hamilakis 2002; Shilling 2008.
13 Wedde 1999.
17 Malafouris 2009.
18 Voutsaki 2010.
19 Rehak 1999.
21 Mina 2008.
22 Hitchcock 1997.
24 Preston 2004a, 2004b.
on regionalism; German on performativity; Letesson and Vansteenhuyse and Fox on perceptual and sensorial issues; Nafplioti on biosocial conditions; and especially Hamilakis on consumption and multimodal reconfigurations.

In order to approach the Minoan human body anew, we should collapse the distinction between human remains and representations. Objects (which may bear depicted bodies) can have their own cultural biographies, shifting agency and multi-sensorial affordances, as argued by e.g. Appadurai, Kopytoff, Hoskins, Sofaer, Hamilakis, Gosden and Marshall, Joy etc. Objects may have represented personages that we usually assume (e.g. a “Snake Goddess”), but they may also have been personages themselves, contra prevalent indexical interpretations. Artefacts could have served as extensions and shapers of the physical body, not just as tools, adornment, utilitarian objects etc. So, objects could have been subjects; depicted bodies could have been treated as physical ones.

Biological bodies, on the other hand, also had cultural biographies and shifting agency. Sofaer convincingly argues that the human body, made of chemicals itself just like an artefact, displays plasticity: it can be altered and conditioned by materiality beyond its genetic predisposition. The use of an artefact has consequences for both it and the corresponding part of the biological body. Furthermore, biological bodies may also have been treated as “objects”, i.e. receptors of action, e.g. during disposal and/or disarticulation. So, physical bodies could have been objects, although I would not necessarily treat biological and represented bodies as homologous. Instead, I want to highlight that the interface of physical body and artefact was not necessarily a distinguishing boundary, as “the body is the nexus between biology and culture”. To take this further, “as each person was a unique constellation of dimensions of difference and networks of sociability, it is the very relationality of his/her existence that became the foundation of his/her agency.”

For the purposes of my argument, I take the “human body” to mean not only the skin containing organs, muscles, bones etc. or the materially finite bodily depiction, but also the socially constructed aspects which may extend it or reshape it despite its biological or artefactual boundaries. Indeed, as Meskell puts it, “an embodied body represents, and is, a lived experience where the interplay of irreducible natural, social, cultural and psychical phenomena are brought to fruition through each individual’s resolution of external structures, embodied experience and choice”. Building on much of the aforementioned research, therefore, and influenced by further works

25 German 2005; also see German 2000; and, to a lesser extent, McGowan 2006.
26 Vansteenhuyse 2006.
27 Fox 2008; also see Tsamis 2006.
28 Nafplioti, this volume.
29 Hamilakis 1998, 2002, 2008. This cursory list is by no means exhaustive, of course.
30 See also e.g. Minas, Nafplioti, Peters, Soar, Zeman-Wiśniewska, this volume.
31 Kopytoff 1986.
33 Malafouris 2008, esp.118; Whitley 2002; Voutsaki 2010, esp. 82.
34 Appadurai 1986.
35 Kopytoff 1986.
36 Hoskins 2006.
37 Sofaer 2006.
38 Hamilakis 2002.
40 Joy 2009.
42 Cf. Malafouris 2008, esp.120; Fowler 2008, 47.
43 Sofaer 2006, 70–9, esp. 84, 86.
44 See also Fowler 2008, 48.
46 Cf. Shilling 2008, 150, who makes a similar point.
48 Voutsaki 2010, 90. See also Meskell 1998, 153; Tarlow 2002, 26; Malafouris 2008, 116; Borić and Robb 2008, 3; and Joy 2009, 545 for an application of the relational approach to object biographies/identities.
49 My definition overlaps, but does not coincide, with Grosz 1995, 4 (as cited in Joyce 2005, 141).
50 Meskell 1998, 159.
I want to take a closer look at the human body as a node of entangled materialities, concepts and interactions. There is a multitude of Minoan human beings available to us. An examination of their fluctuations per area (and through time) is not a new phenomenon in specialist studies, e.g. in discussions of figurine types, glyptic or burial assemblages, not to mention non-somatic fields, such as pottery studies or demographic and urbanization research. My paper draws examples from the combination of such a variety of data about the prehistoric human condition: from mobile artefacts (e.g. seals, sealings, furniture, pottery), immobile artefacts (e.g. architecture), ecofacts (e.g. osseous material) etc. Examination of this Minoan corporeal dataset has been conducted in part through electronic cataloguing of bodily occurrences and has taken into consideration, among others, area, era, status, medium, iconography, pathology, bodily treatment, fragmentation, nutrition etc. But it is not my intention here to provide an exhaustive account of stratified Minoan corporeal networks. Instead, having previously discussed bodily consumption, animal-human hybridity, religious exchanges from a corporeal perspective and the human body in Minoan religious iconography, my general intention with this paper is to work through further potential bodily concepts within the chronological and geographical limits of Bronze Age Crete.

In order to navigate through a potentially vast exploration of the relationality of Minoan human beings, I propose the notion of zonation: the gamut of states of difference between bodies. These states of difference may be geographical, social, sensory etc., perhaps visually conceptualized as a series of cross-cutting ripples. The specific aims of my paper are, therefore, to

1. highlight the largely elusive and/or underplayed diversity of biological and represented humans in Minoan Crete through a combination of data from different sources;
2. and, in turn, point out the body’s consequentiality for Minoan identities.

The future outcome of such investigation, of which only examples are selected here, would result not necessarily in a quantifiable corpus of data, but, rather, in a multimodal description of the shifting Minoan human condition.

52 E.g. Joyce 2005.
53 Rautman 2000.
54 Sofaer 2006.
56 Joy 2009.
57 Voutsaki 2010.
58 See also Simandiraki-Grimshaw 2010c.
60 Krzyszowska 2005; Weingarten 1983; Tsagaraki 2006.
62 E.g. van de Moortel 1997.
63 Branigan 2001.
64 This is in direct response to the caveat expressed by Boyd 2002, 138 (quoted in Joyce 2005, 151) for combining examinations of “food consumption, treatment of the dead body, treatment of the living body, and body representation”.
66 This is the overall, and long-term, aim of the project, which I have been conducting since 2007.
67 Simandiraki 2008.
68 Simandiraki-Grimshaw 2010a; Simandiraki-Grimshaw and Stevens 2012.
69 Simandiraki-Grimshaw 2011.
70 Simandiraki-Grimshaw 2010b.
71 Cf. Joy 2009. As Voutsaki (2010, 91), again, rightly puts it: “each person consisted of a unique combination of intersecting vectors of difference, had different allegiances, had a unique biography engaging with different groups and communities in different stages of his/her life, and hence positioned him-/herself differently regarding cultural traditions and social obligations. Each person contained the potential for change”.
72 E.g. Morris 2009, 185, states: “the diversity of the figurines is only imperfectly glimpsed through the currently published material”. I would add that this is true for most somatic occurrences, from figurines to skeletal remains. Cf. Meskell 1998, 147 on experience conflation.
73 Cf. Malafouris 2008, 121; Hamilakis et al. 2002. 2. My approach is an explicit, positive response to Hamilakis 1998, 116: “we should try and comprehend humans in the past as embodied social relationships, with sensory and emotive properties”.

269
The Body Brand and Minoan Zonation

Minoan Bodily Zonation

One obvious concept of difference might be the zones arising from a textual reading of the human body. E.g. the constriction of the waist in elite Neopalatial representations for both sexes can be read as a dissection of the human body in two halves, the upper half often (half)naked, the lower half often (half)dressed. Another example, wherein biological indicators of sex, such as genitals and breasts, are absent, might be read as an indication of sexual immaturity or crudeness or partiality of representation. The zones implied by such an analysis would juxtapose sexually mature vs. immature bodies, or crude vs. detailed bodies or completely preserved vs. partially preserved ones. Yet another example might be the reading of attire as an indicator of status: the more elaborate the attire, the mightier the person’s finances. In this case, attire might also be seen to emphasise biosocial zones on the body (hats on heads, bodices around breasts).

All these readings may indeed be correct and valuable indicators of biological, economic and social stratification. But they have two common, limiting assumptions: a) that the representation or interment of a body is a reflection of its biological and social realities rather than aspirations, b) that the surface of the body, “the social skin”, is just that, a canvas onto which culture is projected, bypassing the person’s more complex experience within his/her body. In order to take the concept of zonation further, therefore, we need to build upon, but go beyond, textual readings. We can also consider other somatic configurations beyond the body’s surface and physical location: its biological and sensory manipulation, its boundaries, its scaling, its partibility and its audiences.

Let us take zones arising from a biological and sensory experience and manipulation of the human body. Going beyond the aforementioned textual readings as a springboard, we can focus on the human body itself. The human condition, as it emerges from the limited osteological publications, is that of diverse treatment, afflictions and conditions. Our preconceptions of Bronze Age Cretans as disembodied actors creating social complexity through artefactual production (architecture, pottery, administrative devices) frequently overlook the short lifespans, angst and suffering they would undoubtedly have endured, according to their osteoarchaeology. Growing up in various eras and places in Minoan Crete seems to have often been fraught with (seasonal) malnutrition, physical stress (perhaps child diseases/malaria/fever/scurvy) and arrested growth, chiefly resulting in tooth enamel hypoplasias and Harris Lines, or even dwarfism. Life expectancy was ca. 28–30 years for women and 31–35 for men, with “peak female mortality … between the ages of 20–25 years”, i.e. core reproductive ages. If Minoan women did not start their menstrual life until ca. 17 years, as had been the case with many European populations until the last century, the window of reproduction for many was perhaps very narrow indeed. During adult life, pain, suffering and death may have been caused by e.g. bone fractures, tuberculosis, osteomyelitis/periostitis, brucellosis, aneurisms, anaemia/thalassaemia, osteoporosis, cancer, fight wounds (by sword, sling stone, axe?),

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74 Younger n.d.
75 E.g. Kyriakides 2004; Polinger Foster 1997.
76 Joyce 2005, 144; Malafouris 2008, 118.
77 Joyce 2005, 145.
80 McGeorge in Betancourt et al. 2008, 578.
82 But exceptions did exist, e.g. some septuagenarian occurrences, McGeorge 1988, 48.
83 McGeorge 1988, 53.
84 McGeorge 1987, 412; 1988, 51; Arnott 1999, 500.
85 E.g. McGeorge 1988, 52.
86 Arnott in Betancourt and Davaras 2003, 157, 159.
88 McGeorge 1988, 50; Arnott 1999, 503.
89 Arnott in Betancourt and Davaras 2003, 158; Gowland in Preston 2005, 122 for examples from Chania and Armenoi.
90 McGeorge 1988, 53.
91 McGeorge 2008, 125.
92 E.g. McGeorge in Betancourt et al. 2008, 581–89; these occur in both men and women.
mouth abscesses,\textsuperscript{93} caries\textsuperscript{94} and tooth loss,\textsuperscript{95} which got progressively worse through the Bronze Age,\textsuperscript{96} sensory disturbances\textsuperscript{97} and various other afflictions.\textsuperscript{98} The treatment of such ailing bodies, from the application/internalization of prayers and herbs\textsuperscript{99} to the casting/immobilization of limbs\textsuperscript{100} to tooth extraction\textsuperscript{101} to skull surgery/trepanation,\textsuperscript{102} was unpredictable, painful\textsuperscript{103} and differentially available. To these states we may add waist constriction,\textsuperscript{104} parturition, occupational health hazards\textsuperscript{105} etc. Such might have been the becoming of a Minoan biological body.\textsuperscript{106}

But what if we try to read between the biological and representational lines? The aforementioned example of the constriction of the waist was probably not just fashion. It would artificially change bodily proportions with the intention of accentuating the size of the torso and hips, both erogenous and reproductively significant zones.\textsuperscript{107} This, in turn, was perhaps meaningful in a demographic context of short lifespans and afflictions, which would necessitate early reproduction and therefore emphasise early fertility. It is also enticing to view elaborate attire, particularly that depicted on the Knossos and Hagia Triada frescoes,\textsuperscript{108} as a manipulation of corporal labour and time. The wearing, or at least the representation of the possession, of an elaborate piece of clothing may indicate the commanding of the temporal and physical aspects of all those working bodies who were accommodated, fed, instructed, specialized, ordered and regulated in order to clothe the one, elite body. Indeed, the elaborate wearing of several of the depicted garments could have implied an additional helping human body, who could perhaps be construed as an extension of the attire.\textsuperscript{109} Furthermore, in Neopalatial/Final Palatial depictions of humans, finger and toe nails,\textsuperscript{110} as well as feet,\textsuperscript{111} appear groomed and clean. Hair is untangled, coiffed, adorned or even shaven,\textsuperscript{112} often shaped by laborious head gear.\textsuperscript{113} But a very small proportion of the population contemporary to these bodies would have had clean and groomed nails, clean and non-chapped heels, could have sustained long hair, or afforded razors.\textsuperscript{114} Teeth are to be seen on only three quasi-caricature frontal faces carved on sealstones\textsuperscript{115} among the thousands of human representations in the Minoan microglyptic corpus.\textsuperscript{116} If we combine this with the dental deterioration of e.g. Zakros bodies\textsuperscript{117} or the caries, abscesses, attrition and tooth loss in Knossos bodies,\textsuperscript{118} we may conclude that tooth depictions were deliberately avoided because they would jar with the rest of an image which was meant to project health and grooming. So, we see here the creation of a range of implied biosocial zones, separating those with the time and means for grooming and medical attention from those without, emphasizing fertility and youth by somatic alteration, turning garments from textile pieces into condensations of bodily labour. And all this before we even tackle the social complexity and intentional antagonism displayed in the mortuary arena, as highlighted e.g. by the work of Preston on the micropolitics of LM II Knossos.\textsuperscript{119}

\textsuperscript{93} E.g. Gowland in Preston 2005, 119; see also McGeorge 1987, 411, for an individual with a long-term habit of chewing food on the less painful side of his/her mouth.
\textsuperscript{94} Arnott in Betancourt and Davaras 2003, 157; McGeorge 1987, 409; 1988, 53; Gowland in Preston 2005, 118, also citing parallels. This is commonly attributed to the consumption of more carbohydrates.
\textsuperscript{95} McGeorge 1987, 408; 1988, 48.
\textsuperscript{96} McGeorge 1988, 53.
\textsuperscript{97} McGeorge in Betancourt et al. 2008, 590.
\textsuperscript{98} McGeorge 1987, 408–9, 412; 1988, 48; 2008; McGeorge in Betancourt et al. 2008, 578.
\textsuperscript{99} McGeorge 1987, 414.
\textsuperscript{100} McGeorge 1987, 413; 1988, 49; McGeorge in Betancourt et al. 2008, 594; Arnott 1999, 502.
\textsuperscript{101} McGeorge 1988, 52.
\textsuperscript{103} Cf. Arnott 1999, 501.
\textsuperscript{104} Younger n.d.
\textsuperscript{105} Arnott 2008.
\textsuperscript{106} Cf. Joyce 2005, 147–49.
\textsuperscript{107} Younger n.d.
\textsuperscript{109} Cf. Younger n.d.
\textsuperscript{110} Evans 1967, pl. B, fig. 2.
\textsuperscript{111} MacGillivray et al. 2000, pl.15.
\textsuperscript{112} Evans 1967, pl. V, fig. 4.
\textsuperscript{113} Rethemiotakis 2001, col.pl. 2.
\textsuperscript{114} Cf. Wells 2008, 83.
\textsuperscript{115} E.g. CMS VI, no. 101a.
\textsuperscript{116} I thank O. Krzyszowska for this reference.
\textsuperscript{117} Becker 1975.
\textsuperscript{118} Carr 1960, 120–21; Wall et al. 1986; Gowland in Preston 2005, esp.118–21; Naftpioti, this volume.
\textsuperscript{119} Preston 1999.
Of course, in order to fully appreciate the construction of physical and social zonation, we also need to approach bodies as internally manipulated experiential loci. Diet, especially diacritical feasting, the use of aromatics in foodstuffs and cosmetics, the synaesthesia of commensality also created zones:

1. zones of social strata: e.g. from those who could afford exotic commodities to those who afforded substitutes to those who did not;
2. sensual zones: e.g. from those who experienced processed aromatic foodstuffs regularly to those who experienced raw versions occasionally;
3. perceptual and performative zones: e.g. from those who may have used imported processed hallucinogens to get specific entopic results, e.g. poppies, to those who relied on self inflicted, different hallucinations by the manipulation of their blood flow and brain waves.

That brings us to the type of zones arising from somatic boundaries and scaling. Apart from the differential consumption of foodstuffs and other commodities, we also have evidence of the differential access to spaces and concepts. A very good example is the distribution of represented and perhaps physical bodies on the two terraces of the Atsipades peak sanctuary, whereby at least two zones of behaviour are attested. Yet another example is the layout of the Shrine of the Double Axes, with its stepped structure and some visually accessible but physically inaccessible parts. The Knossos Miniature Frescoes from the Early Keep area also provide a good idea of body boundaries and their transcendence. These frescoes, possibly fallen from an upper floor, were found scattered in an area of the Palace abutting the Central Court. They were designed as perhaps more than visual renditions of far-away humans. If the room(s) they adorned were crowded in real life, with all the body heat, smells, flickering lights and echoes this may have entailed, these frescoes would have created a compelling spatial, synesthetic illusion of a much bigger indoors or perhaps an outdoors crowd (i.e. as if looking at bodies behind the physicality of a wall, onto the Central Court).

Into this, we ought to factor the variable build, age and potential eye conditions of the viewers. These are, of course, hypotheses in need of much more exploration, but may help towards an understanding of how somatic concepts were negotiated, materialized, layered and turned into sensuous memories. A final case of spatial boundaries are geographical zones. These are exemplified well by not only the different settlement and burial patterns across the island, e.g. palace towns vs. non palace towns, but also by differential treatment of the body within the same region or by the different physical experiences involved in, say, ascending onto Mount Juktas or descending into the Psychro cave.

How a body moved through physical space may, of course, not be limited to biologically sized bodies. A body entered into scaled engagements with other bodies, natural and human-made environments. That is to say, the minute relief body of e.g. the Master Impression, which represented a specific bodily ideal, moved through geographical distances because of the body/ies that shaped it and the body/ies that owned it. It belonged to a private physical zone and to a social (elite) zone very similar to those of other conceptually comparable but geographically distant bodies, such as those on the Chieftain’s Cup.

Somatic boundaries do not need to be limited to explorations of physical space and scaling; they can also betray conceptual malleability of the body in conjunction to fauna, flora or artefacts. For example, body boundaries are

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121 Hamilakis 1998; Simandiraki 2008.
122 Cf. Howes 2006; also see Hamilakis’s (1998, 128; Hamilakis et al. 2002, 10) fundamental social and corporeal notion of “gastropolitics”, following Appadurai.
125 Cf. Stevens 2007, esp. on issues of proximity.
127 Evans 1901–1902, 97.
129 Hood 2005, 64.
130 Cameron 1987, 327, fig. 11.
132 Cf. Berg 2004; Turnbull 2002; Hamilakis 2002, 129 on the “sensory landscape”; also see Liston’s (in Tsipopoulou and Vagnetti 1995) point about the pronounced musculature of the people in Achladia, which she attributes to a “lifetime of walking”.
133 Hallager 1985, fig. 13.
134 Cf. Sakellarakis and Sapouna-Sakellaraki 1997, 1, fig. 253; Müller 2005.
played out in renditions of animal-human hybrids. Interestingly, while some depictions clearly distinguish between humanity and animality, e.g. Minotaurs on seals and sealings or peripersonal animal ornaments, others, such as the Zakros sealings hybrids, explore a physical and conceptual dissolution of this distinction, whereby it is impossible to disentangle one “nature” from another. What is more, these configurations actually “behave” like hybrid bodies. Such re-imagined corporealities, almost exclusively from elite contexts, occur in potentially cosmopolitan, certainly nodal geographical locations (e.g. Knossos, Malia, Phaistos, Zakros, Hagia Triada etc.), at which physical and perceptual corporealities were perhaps in flux.

This may lead us to consider another type of zones, those arising from bodily permeability and partibility. I have argued elsewhere that anthropomorphic vessels, representing as they do a human-artefact hybrid, can be seen as not just symbolic cult objects, but also as human-made manifestations of the permeable, liminal, fluctuating body. Bodily permeability may not be easy to detect on skeletal material, but the purposefully made people-vessels speak volumes about the zoning of the body, its regulated flows and its interactive potential with a biological user. The proliferation of such permeable bodies in certain regions (e.g. Myrtos, Koumasa, Moires, Hagia Triada, Phaistos, Kamiliari, Mochlos, Karphi) may also be significant as an indicator of regional bodily concepts.

If permeability may be seen as highlighting bodily flux, then partibility may be seen as charting the conceptual constitution or dismemberment of a dividual body. One example of body partibility is the autonomous rendition or separation of body parts, e.g. heads, legs, arms etc. into amulets, offerings, furniture attachments, indexical frescoes and other configurations. Such isolation of body parts is echoed in the skeletal record, where there are often occurrences of not just disarticulation, but also deliberate rearrangement or isolation of human limbs. E.g. we find defleshed bodies in Knossos and Pseira, reclaimed skeletons in Mochlos, rearranged skulls in Archanes, a bone grid, incompletely decomposed skeletons and deliberately spatially scattered remains in the Hagios Charalambos cave, cut and pounded human bones at a variety of mortuary locales. Despite the fact that we do not find or recognize amulets, offerings or furniture made of biological limbs, abundant iconographic limbs (e.g. seals, pendants) are indeed partial bodies for peripersonal use. Anatomical zones were thus undone by biological or iconographic dismemberment and were reconstituted by or on a living body. The latter could then make sense of, enhance and reconfigure its own constituent parts. This is best illustrated by examples where the limbs are supposed to actually come together, such as the presumed xoanon from Anemospilia.
The Body Brand and Minoan Zonation

the bronze and stone hair locks from Knossos\textsuperscript{161} and the Palaikastro Kouros figure.\textsuperscript{162} Although the partibility of these particular examples may be due to their materials, it also seems characteristic of wider, inter-regional, diachronic trends which render the human body as a sum of its parts.

A final type of body zonation we can consider here involves its audiences. It is often assumed that the range of crude-to-detailed bodies (be that in their treatment or deposition) is a progression across time or across class/status.\textsuperscript{163} Perhaps, however, it is a conscious differentiation propagating a particular image\textsuperscript{164} (cf. the language accents in current advertisements for specific audiences). One may also compare the way the same corporeality and attire may be rendered in very different ways regionally and socially.\textsuperscript{165} The difference is not simply one of skill or expense; it is also of concepts of and aspirations for the human body. The young, thin waisted, lavishly clad, sinewy, shimmering yellow, gold or gilded body of Neopalatial aesthetics is an elite construct of a social zone. This zone emanates from private, small scale seal and more public fresco figures\textsuperscript{166} towards zones of imitated corporeality. In the latter we may find aspirational imitations in e.g. red bronze customized figures and in mass produced, dull red clay ones. Somatic patterns of a site may also differ from those of another site as expressions of regional identity, politics or status. Any identifiable cross-overs, then (e.g. a seal from one place making a sealing in another place), may be indicative of somatic projections, “branding”, of the one site as distinct from the other.\textsuperscript{167} Indeed, Morris\textsuperscript{168} explores how “figurines from Bronze Age Crete […] played an active role in constructing and projecting individual social identity within Minoan culture through the selective and morphologically distinct presentation of the human form”.

The Body Brand?

Within the constraints of my paper, I have attempted to briefly explore some ways in which the diverse Minoan body might have been constructed. In the process, I have argued that instead of using binary oppositions (e.g. biological vs. represented bodies), the biosocial construction of somatic differentiation is best understood through the notion of zonation. Let us take our final example from Neopalatial/Final Palatial Knossos and environs. Whether we rely directly on osteoarchaeological data or not, a number of somatic zones emerge. First of all, we have the people represented in two and three dimensions in the palace and surrounding town,\textsuperscript{169} the people who made and those who experienced such bodies. We have dietary diacriticality in the form of specific animal bones, butchery techniques, aromatic foodstuffs and cooking pot sizes.\textsuperscript{170} Skeletal remains include both interments\textsuperscript{171} and butchered\textsuperscript{172} bodies, displaying a variety of states, notably food-related afflictions. We even have fingerprints on pottery\textsuperscript{173} and sealings,\textsuperscript{174} fleeting sensory moments of now lost corporeality. We have Linear B references to specific people involved within and beyond the palatial industries,\textsuperscript{175} notably flock rearing\textsuperscript{176} and textile production,\textsuperscript{177} as well as estimations of scribal hands.\textsuperscript{178} Thus, we have sensory zones incorporating taste, smell, tactility, vision, sound, pain etc.\textsuperscript{179} We have occupational/social zones creating biological effects, e.g. people weaving. We have

\textsuperscript{161} Hägg 1983; Sapouna-Sakellarakis 1995, pl. 53.
\textsuperscript{162} MacGillivray et al. 2000; Sackett 2006, fig. 11 c, d.
\textsuperscript{163} Cf. Gombrich 1991, 12.
\textsuperscript{164} Cf. Morris 2009, 183, figs. 15.2, 15.3; also Joyce 2005, 146.
\textsuperscript{165} Compare e.g. Rethemiotakis 2001, front cover with idem, fig. 101.
\textsuperscript{166} The suggestion of Gates (2004, 42) becomes relevant here, according to which the introduction of pictorial wall paintings in the Neopalatial era might have occurred “because of the need or desirability of such imagery in an evolved sociopolitical framework of newly centralized authority for which the veneration of nature and the importance of religious ritual have become its metaphysical foundation”.
\textsuperscript{168} Morris 2009, 179.
\textsuperscript{169} Cf. Logue 2004.
\textsuperscript{170} Isaakidou 2007.
\textsuperscript{171} Preston 1999.
\textsuperscript{172} Wall et al. 1986.
\textsuperscript{173} Cf. Branigan et al. 2002.
\textsuperscript{174} V. Petrakis, pers.comm.19/7/2011.
\textsuperscript{175} Cf. Landenius Enegren 2008.
\textsuperscript{176} E.g. Baumbach 1987; Steele 2009.
\textsuperscript{177} E.g. Killen 1964.
\textsuperscript{178} Driessen 2000.
\textsuperscript{179} Malafouris (2008, 116), examining Mycenaean sensoriality, talks about the “construction and social appropriation of a new sensory environment emphasising certain properties, media, and themes of representation ….”.
economic zones: elaborately clad bodies, textile producing bonded bodies, fallow deer eating bodies, grain eating bodies. All these zones, making and made up by their constituent bodies, create a consistent, if shifting picture of Knossian, stratified corporeality. The overall phenomenon emerging is the creation of the Knossian body brand, i.e. the embodied production of the socioeconomic self: elite, everyday, industrial, ailing etc.180 By being sensorially and conceptually manipulated, biological and represented bodies combined in creating a projection of the self within the community (in this case Knossos) and beyond it (to e.g. Chania, Phaistos, Hagia Triada etc.).181

I believe the approach adopted in this paper, highlighted by the selected examples used here, is archaeologically very fruitful. This is not just because we can understand the construction of Minoan regional identities better. It is also significant because, through a systematic exploration of bodily zonation, we can perhaps tease out the Minoan human condition, detect the significant, multidimensional contribution of the body to socioeconomic change and, ultimately, re-situate humanity in the process of the shaping of Bronze Age Crete.

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This paper presents a performative approach to space and the built environment, arguing that performance is an underused yet informative tool which can aid us in understanding more subtle and nuanced areas of archaeology, such as ideology, ritual and social constructs. A discussion of the usefulness of this approach is followed by a case-study from the cemetery sites of Early Bronze Age Crete.

Cemeteries are ideal areas to examine as sites of performance. Performances within the mortuary sphere are common occurrences, and cemeteries are often regarded as arenas for social and cultural interaction for the community of the living. This is especially prevalent in an analysis of Early Bronze Age Crete, where cemeteries are the primary architectural evidence, suggesting an investiture in the spaces of the dead not accorded to those of the living.

House Tombs were the prevalent burial custom of north-eastern Crete, while circular tholos tombs were common in the south-central region. The social realities – and differences – of these two areas are usually interpreted on the basis of material evidence deposited within the tombs and the energy invested in their construction. The purpose of this paper is to re-evaluate these interpretations by focusing on the use of space within the built mortuary landscape to decipher the performance of individuals within this constructed landscape. I argue that the arrangement of space, and of objects and structures within space, provides a separate category of data from which to draw conclusions about social structures within Early Minoan society. In particular, I will focus on tombs constructed in the EM I and II periods, and those from which kinesic interpretations can be discerned – namely the tholos tombs from Moni Odigitria, Hagia Kyriaki, Koumasa, and Platanos, and the house tomb from Mochlos. This approach can be used to illuminate the different ways various societies perceived themselves and reacted to the island-wide emergence of social hierarchies and differentiation.

Introduction

The Early Bronze Age on Crete is a period largely known from its burial record, which varies regionally and chronologically. It has previously been argued that the divergences in the burial record may represent differences in social structures between the communities and societies which used these cemeteries. The social realities of these societies have usually been interpreted on the basis of the material evidence deposited within the tombs and the energy invested in the tomb construction. The purpose of this paper is to re-evaluate these interpretations by focusing on the use of space within the built mortuary landscape during the early part of the Bronze Age, specifically the EM II period, to decipher the performance of individuals within this constructed landscape. The paper will focus primarily on those tombs where kinesic activity can be interpreted, in order to offer up a new form of evidence for interpretation. Here I argue that the arrangements of space and of objects and structures within space can provide a separate category of data from which to draw conclusions about social structures within Early Minoan society, which can be valuable in deducing how certain communities viewed themselves and their position in the world. As Victor Turner said:

“Cultures are most fully expressed in and made conscious of themselves in their ritual and theatrical performances ... A performance is declarative of our shared humanity, yet it utters the uniqueness of particular cultures. We will know one another better by entering one another’s performances.”

By “entering into” Minoan performance, we can get to know them a little better.

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1 Xanthoudides 1924; Seager 1912; Branigan 1993.
Cultural Performances at the Beginning of the Bronze Age

**Performance**

Performance is an action through which humans project images of themselves and their world to an audience, and is a powerful way of negotiating social roles and identities. Cultural performances act as reflexive instruments of cultural expression – they are critical and inter-subjective, commenting or reflecting upon themselves and others. By self-consciously manipulating the formal features of communication, such as the physical movement in dance, language and tone in song, cultural performances make one conscious of its devices. In this respect, they objectify and lay open for scrutiny culture itself. Paradoxically for the archaeologist, however, performance is most noted for its ephemerality. But while performance itself is intangible, it does leave traces and residues in the material world. The body itself is material, as are the props used in performance. Indeed, the cemetery is a material place which may be part of the performance not only as a stage but also through the active involvement of limiting and directing practice. We can go some way to recreating past performances by examining these physical remains which humans leave in the landscape, reading them as clues to how bodies would have interacted with the site and the landscape. Viewing objects of their material culture as physical prostheses – or an extension of themselves – aids us in understanding the interaction of people with their surroundings.

Performance acts can be a viable form of evidence in regard to how a community or cultural group communicates their “issues and attitudes”. As such, Minoan funerary performances become not only an aesthetic act, but also a means of learning and projecting identity and a means of thinking and talking about how culture can be enacted or created by participants. As messages are inherent within certain forms of performance, it inevitably enters the arena of ideology. Performance can then be viewed as an ideological transaction between performers and the audience. Performance materialises the ideology of an institution, translating it into readable signs, which are then interpreted by an audience. Performance, as a form and style of communication, creates and reproduces cultural values through bodily movement which is infused with meaning and social power.

A focus on the materiality of performance allows for its archaeological investigation. The physical manifestations of performance are revealed through topography, material culture, and – crucially – architecture. Architectural (and/or topographic) layout affects the relationship between performer and audience, and regulates, coordinates and choreographs movement and access, allowing a kinesic and experiential understanding of the built environment.

**Cemeteries as Sites of Performance**

Cemeteries are in many ways ideal contexts to examine as sites of performance. Not only are performances within the mortuary sphere common occurrences, both temporally and spatially, but cemeteries are often regarded as arenas for social and cultural interaction for the community of the living. As locations for social gathering they would have been sites of intense social interaction, and for the negotiation of social roles and identities. As a result, funerary performances would have been powerful public events, which would have impacted on both the participants and the spectators. This is especially prevalent in an analysis of Early Bronze Age Crete, where cemeteries are the primary architectural evidence, suggesting an investiture in the spaces of the dead which does not seem to have been accorded to that of the living. The durability of mortuary architecture also suggests that its builders were interested in creating “sets” for future performances, through the facilitation and inhibition of certain kinds of practice.
Minoan Tomb-Types

Two of the most prominent funerary monuments from the EM I and II periods on Crete are either circular or rectangular. Circular tombs, known as tholoi, are prevalent in the most fertile area of the island, the Mesara as well as Asterousia, and rectangular, or house, tombs, are more frequently attested in the eastern part of the island, particularly in the Mirabello Bay.

Tholos tombs are circular built tombs, first constructed in the EM I period. These served as communal graves for families or clans for a long period of time, often up to eight or nine centuries. During this early part of the Bronze Age, the Cretan tholos tombs vary in size from an interior diameter around 4 m (Koumasa A) to larger than 13 m (Platanos A). The tombs consist primarily of a circular shaped main burial chamber, and annexe rooms were added at some of the tombs in EM II. Geographically, in EM IIA, tholoi expand outwards from their original location in the Asterousia mountains into the Mesara plain, and two-tholoi cemeteries become more common than in the previous EM I period.

In the North and East parts of the island, we find a different form of communal tomb, the house tomb. These are rectangular built tombs, which can be free-standing buildings with no more than two rooms (although in later periods they are more complex). They developed in the EM II period.

Burial Ritual

While ritual practices from this early period are notoriously hard to reconstruct, it seems that the burial procedures in both forms of tomb appear to be similar, involving a multiple-stage process. The body was initially laid out in the antechamber of the tholos or within the house tomb itself until the flesh had decayed, at which point it was interred in the tholos or, in the case of the house tombs, re-collected and manipulated (the skulls in particular seem to have special importance). Despite these similarities in burial ritual, the architectural settings for these activities are quite different, which may suggest a difference in this regard to attitudes towards the living, rather than attitudes towards the dead. It is these differences, and their expression through performance, I wish to examine in this paper.

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15 For the most recent discussion on Early Minoan tomb types, see Legarra Herrero 2014.
16 Branigan 1970.
Architectural Differences

Tholoi

My main argument here is that the relationship between architecture and performance also suggests a divide between the two regions, or at least a difference in the social structure and varieties of social interactions which define these different social groups who used specific cemeteries. In regard to the tholos tombs, several of these see the introduction of paved or enclosed external courts in the EM II period. While not all of the known tholos tombs in the Mesara region have specific paved courtyards, many still have some kind of open area for performance, and it should be noted that other examples may no longer be archaeologically visible, or were overlooked during the original excavations. However, they are an important feature worth investigating in order to reconstruct performative acts. Not part of the original tholos tomb architecture, the paved area may have first appeared in EM I, at Tholos B at Moni Odigitria (fig. 1), where the enclosed areas appear not to have been paved, rather a pebble surface was laid down within a boundary wall. EM II examples are known from the tomb Platanos B (fig. 2), where the enclosure, whose paving consists of slabs of green slate above a foundation of stones and clay (fig. 3), extends between the two largest tombs, A and B, as well as EM II Koumasa, where bluish slate paving extended over an area of 6.5 m in diameter, a size which suggests considerable effort was put into its construction. At Hagia Kyriaki, the enclosed area is similar to Moni Odigitria in that it is not paved, and a surface of levelled and beaten soil was found within an enclosure wall.

During the EM II period these paved or enclosed areas do not appear at every tholos tomb site, but wherever they appear, they are large enough to accommodate a gathering of considerable numbers of people, possibly the entire community. It should also be noted that the lack of these sites at certain cemeteries may be due to preservation and recovery issues, and as such they may have been present at many, if not all, cemeteries in this period, underlining the importance of specific areas for performance and ritual, as well as performance itself, to these communities.

House Tombs

At the house tombs, the architectural use of space choreographs a different form of movement. For example, at Mochlos, the more elaborate tombs (I/II/III and IV/V/VI) are located separate from the majority of the tombs further down the slope on the west side of the islet. At tomb IV/V/VI, dated to EM IIA, a small court complex was discovered outside the tomb (fig. 4). Four steps led to a paved area, a walkway or pavement, which lay along the façade of the tomb. This paved avenue ends at a corner stand, a small rectangular platform, on which fragments of stone vases were found. This platform is situated directly outside the entrance to the tomb, and has been interpreted as an altar. A raised terrace, perhaps intended to accommodate spectators, overlooked this small court. Thus what we appear to have at this tomb is a paved avenue of approach (fig. 5), possibly a ceremonial entrance, leading to the tombs. There is an ascending ramp, a raised terrace for spectators and an altar, which may have been the objective of those following the path.

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19 See also Legarra Herrero 2009.
20 Branigan and Campbell-Green 2010, 129.
21 Branigan 1993, 129.
22 Murphy 2003, 269.
23 Xanthoudides 1971, 6.
24 Bardsley 2004, 22.
The paved area which lies alongside the façade of the tomb is between 1.40 and 1.64 m in width, while the terrace which overlooks the tomb is 1.80–2.00 m wide. This suggests that a slightly larger group could assemble on the terrace at any one time than could approach the tomb along the pavements. This evidence indicates that processions, a form of performance in which participants move through a given space in a defined order, were the form of performance which occurred here.

Similar architectural structures and layouts have been found at other House Tomb sites. At Myrtos Pyrgos, a flight of steps descends from the top of a hill to the end of a paved road, which culminates in a small courtyard in front of an EM III/MM IA tomb. Inside the courtyard were found a bench and kernoi. Similar architectural features—a designated route or way, culminating at a specific spot or feature—appear at Archanes-Phourni (Burial Building 6), Chrysolakkos and Gournia (House Tomb B), albeit later than EM II. As with the tholos tombs, the areas which are set aside or built specifically for performance are not standard features of all the tombs, although again this may be an issue of erosion or recovery.

Cemeteries and Performance

As the setting of performance, the paved or enclosed areas of the tholos tombs represent a space with very little internal division, if any, between spectator and performer. Tombs are intimately linked with settlement sites, as the distance between the two will attest—the furthest distance known between settlement and cemetery is around 400 m, at Lebena Papoura. The intimacy of tomb and settlement site suggests that these tombs were very much an integral part of the settlement and incorporated into its worldview. At Koumasa, for example, the paving extended over approximately 300 m², bounded by a straight wall. The enclosed area at Hagia Kyriaki, which, while not paved, showed evidence of trampled ground within a space enclosed by a peribolos wall, measured approximately 45 m². It has been argued that the tomb at Hagia Kyriaki was used by three nuclear families each with an approximate size of five to six persons, for a period of 800 to 900 years. Although it is notoriously difficult to deduce prehistoric population densities, and this estimate is for but one of the several tholos tombs discussed here, nonetheless if this is correct, the paved and enclosed spaces were more than sufficient to hold this number of people, suggesting that the paved or enclosed areas of the cemetery sites were intended for

Fig. 4 Plan of the cemetery at Mochlos (after Soles 1992).

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26 Cadogan 1977, 71.
27 Soles 1992, 221.
28 Sakellarakis and Sakellarakis 1991, 98.
29 Pelon et al. 1992, 82.
30 Soles 1979, 161.
31 See Branigan 1998, 17.
33 Murphy 1997, 31.
the community as a whole, acting as the focus of communal life.\textsuperscript{34} This communal aspect is shown by the location of the paved or enclosed areas within the cemetery. For example at Platanos, the location of the paved area between tombs A and B suggests it was a common area belonging to all the tombs, rather than for one specific tomb.\textsuperscript{35}

Internally, the paved or enclosed areas are relatively spacious, in the sense that there is little architectural material inside them – they are simply open spaces, enclosed by a wall. There is no division within the space – no causeways or internal walls. The enclosed spaces are not overlooked by any platforms or grandstands, and are in most cases located on relatively flat land, visible to anyone approaching the tomb or viewing it from the nearby settlement. Any person or people performing on these enclosed spaces would have been visible not only to those also performing, but perhaps to anyone who could view the performance from the settlement.

Circumstantial evidence, in the form of a clay model found at Kamilari but of a MM II–IIIB date, has meant that these paved areas have generally been considered to have been used for dancing.\textsuperscript{36} While later in date than the creation of the tholos tombs – the Kamilari figures date either from the end of the Protopalatial or from an early Neopalatial phase\textsuperscript{37} – it is worth examining as it provides a link between these open, communal spaces and a specific form of performance. This clay model depicts four people who hold each other by the arms and shoulders surrounded by a low wall decorated with Horns of Consecration. All the figures are nude. Their heads are either covered in peaked caps\textsuperscript{38} or have a lock of hair projecting from the top of their heads.\textsuperscript{39} The latter seems more likely as hairstyles carry important symbolic significance in Minoan iconography, albeit in figural art which developed in later periods of Minoan prehistory.\textsuperscript{40}

The use of this model for reconstructing Early Minoan performance activities is controversial, due to its later date – however, it provides a link between these community spaces and the idea of circular dance. It should also be pointed out that during the period when these models were created and presumably placed inside the tombs, the Kamilari tholos was still in active use, this particular tholos being used during the periods MM IB–MM III and LM I.\textsuperscript{41} While this is obviously later than the initial use of the tholoi and enclosed areas, it should be noted that tholoi have been used near Kamilari since the EM period, suggesting a continuity of action at this site since the early Prepalatial period.\textsuperscript{42} Certainly, the shape of many of the paved areas lends credence to the idea of circular dances. Further to this, mourning dances have been reported in various ethnographic researches.\textsuperscript{43} Contextual analysis associates dancing activities with burials. In ancient Egypt mourning dances appeared on tomb wall paintings.\textsuperscript{44} In the Mycenaean and Philistine cultures of the second half of the second millennium BC, mourning female figurines

\textsuperscript{34} Branigan 1970, 138.
\textsuperscript{35} Murphy 2003, 228.
\textsuperscript{36} See, for example, Branigan 1993, 180; 2008, 21.
\textsuperscript{37} Kanta and Tzigounaki 2001, 154.
\textsuperscript{38} Marinatos 1993, 22.
\textsuperscript{39} Lefevre-Novaro 2001, 90.
\textsuperscript{40} See Davis 1986; Koehl 1986.
\textsuperscript{41} Levi 1963.
\textsuperscript{42} Goodison and Guarita 2005, 185.
\textsuperscript{43} Bloch and Parry 1982; Metcalf and Huntington 1991.
\textsuperscript{44} Brunner-Traut 1958, 61.
were applied to the rims of round clay vessels,\(^44\) indicating that the ceremony was carried out in the form of a circle dance. These items were found in graves.\(^46\) Elaborate depictions of burial ceremonies were often painted on large burial vessels of Greek Geometric pottery. Here we see a clear connection between the function of the vessel and its decoration. Sections of the scene include friezes with rows of male or female figures in formalized body gesture which indicate rhythmical movement in dance.\(^47\)

At the house tombs, what we see is a spatial layout which suggests processional performance. Despite the ephemeral nature of such performance, certain characteristics of procession are manifest in the material record. If procession can be defined as ritual movement of a number of participants through a given space, from a starting point to a goal,\(^48\) then it is either this starting point or the goal that would be the most visible to us in the archaeological record. The culmination or terminal point of a procession is the most obvious physical manifestation of this form of performance, as the completion of the procession occurs at some specified place of sacrifice, offering, burial or existing monumental or natural feature which has a particular resonance for people.\(^49\) This terminal point should be able to help us distinguish a processional way from a regular corridor or passage for transportation, or from regular, non-symbolic movement. In the case of these house tomb sites, the tomb itself acts as the culminating point for the procession, with some tombs also having altars for dedications and offerings at their entrances.

Due to the act of procession involving specific numbers of participants, usually in some orderly manner, the processional way probably also occurs in a restricted physical space.\(^50\) The narrow approaches to the house tombs agree with this definition – at Mochlos, the path leading to the tombs is between 1.40 and 1.64 m in width, while the terrace which overlooks the tomb is 1.80–2.00 m wide, meaning more people could watch the event than could participate. At Gournia, the corridor separating the tombs and leading to the kornos outside the tomb is 1.02–1.26 m wide.\(^51\) The paved approach to the tomb at Myrtos Pyrgos is only approximately 1 m wide.

Visibility from settlement is also a distinguishing feature between Mochlos and the tholos tombs discussed. The cemetery at Mochlos is only 80 m from the settlement, but there is no visual contact between the two. Also, while the trajectory of the path towards tomb IV/V/VI at Mochlos was in part a result of the natural topography, its placement was presumably a deliberate action intended to intensify the experience\(^52\) – when one’s point of view is forced upward it becomes more difficult to both look around and walk; it limits one’s mobility.\(^53\) As mentioned above, however, the paved areas of specific tholoi would have been clearly visible from the settlement sites; for example, those at Kounasa, Platanos and Hagia Kyriaki, were located on flat land, with no walls or natural outcrops obstructing the view between settlement and tomb.

So what we have at these sites is a defined processional area, signalled by a determinate area of passage or movement, which culminates in an area that would have had some meaning to those involved and to the society as a whole. This may be familiar from later periods, where the paved causeways of the west courts of the palaces of Knossos and Malia, as well as the first palace at Phaistos, show similar functions.

**Meanings of Performance**

We have seen that there is a difference between house tombs and tholos tombs in the way they choreograph human movement. The paved areas of the tholos tombs are open; house tombs involved differential access to ritual activity and performance. The paved areas of the tholos tombs allowed the community to come together and enact performances in a communal space; performances at house tombs would have precluded certain members of the community. The house tomb architecture makes a much more visible effort to prescribe and choreograph human movement than do the more open tholos tomb spaces. We have seen how house tomb architecture prescribes movement so that processions are the form of performance which occur in front of and approaching the tombs. Whilst procession may be purely a means of moving from site A to site B, it may also indicate “meaning through

\(^{43}\) Iakovidis 1966; Dothan 1982, 237–45.

\(^{44}\) Iakovidis 1966.

\(^{45}\) See, for example, Schweitzer 1971, 37–52, pls. 30–36, 40–41, 46–50.

\(^{46}\) Hägg 2001, 143.

\(^{47}\) Coles 2003, 212.

\(^{48}\) Johnston 1999, 40.

\(^{49}\) Soles 1979, 161.

\(^{50}\) Vavouranakis 2007, 108.

\(^{51}\) Adams 2007, 365.
movement”.

It is an act of movement embedded with ceremonial or symbolic importance, and it is this importance that distinguishes it from everyday movement through space. While many types of procession exist, I refer specifically here to the work of David Wiles, who defined two different forms of processional space, parade and pilgrimage, the former being a form of organisation which depicts socio-cultural themes, how it displays, actually or symbolically, an ordering of power – which is what I am interested in here.

Because procession involves specific numbers of participants, normally in some orderly manner, the processional way usually moves through a restricted physical space. In keeping with the idea of restriction and accessibility seen at the house tomb sites, a procession can be naturally hierarchical by its very nature and arrangement, rather than a mere succession of figures. Within processions, distinctions can be made: there are those who are included and those who are excluded, as well as those who lead and those who follow, creating a form of performance which is bound up in strategies which can reinforce status and knowledge difference. People can coordinate their hierarchical personal relationships through a set of stylised social cues, which may involve a choreography of time and space. As the path towards the tomb itself narrows this becomes a filter which defines the shape of the performance, from amorphous to linear. This is especially emphasised at the site of Mochlos, where the topography itself necessitated a linear progression towards the west terrace and tomb IV/V/VI, while at the same time the hierarchical nature of this progression was emphasised by the move from more simple tombs to more impressive monumental burials. Although the architectural elaboration of the tombs on the South Slope may have been higher than generally thought, the distinction between the architectural elaboration is further confirmed via orientation and movement. The circulation patterns facilitated by these architectural forms would have established a complex organisation of space and movement. Those who watched from the terrace (such as the one at Mochlos) would be excluded from those who approached up the processional way. The small size of the courts beside the tombs at Mochlos and Myrtos Pyrgos would have created distinctions between those who could enter and those who could not. These distinctions would have been generated and confirmed by where a person stood and how they moved, and these distinctions between participants would have been maintained by the exclusion of those who partook and those who watched, and also between those who led and those who followed. Processions which moved from one place to another will have established an order between the participants at the beginning of the proceedings, and this would have been reaffirmed at their close. Overall, we can read processions as performances which act as expressions of order – representations in which varying levels of social and political importance are located in a hierarchy.

If we consider the tholos tomb architecture and the possible example of representational art, we can see an altogether different form of locale and performance. If we view the paved open areas as settings for performances, whose form is further suggested both by the shape of these areas and the figural art found at Kamilari, circular dances may well have been practised at these sites. Dance is a primary method of emotional bonding – through rhythmic muscular movement participants are affected independently of how they are connected or divided external to the dance performance. As such, dance is a method by which groups of people define themselves. Circle dances in particular create a feeling of solidarity amongst the participants, uniformity of movement being crucial to the harmonious performance of the act and ensuring that everything outside of the circle remains unimportant or even forgotten. Circle dances can be interpreted on several different levels, namely the individual and the community, as well as the cosmological. On an individual level, a circle dance is created by the participation of each individual, who creates the circle with their body. Thus, the individual becomes something greater than

54 Pearson and Shanks 2001, 128.
56 Wiles 2003, 64.
57 Holliday 1990, 73.
58 Barrett 1994, 29.
59 Pollard and Reynolds 2002, 105.
60 Bevan 2010, 29.
62 See Karacic, this volume.
63 As well as the burial goods, see Branigan 1991 and Soles 1998 for more detail.
64 Barrett 1994, 15.
65 Barrett 1994, 15.
68 Brandes 1990, 32.
69 Garfinkel 1998, 228.
them, and contributes to the group dynamic. However, the main focus of the circular dance is the community – in the act of moving in a circle, possibly holding hands, the individual is fused into the group, which becomes one entity. To dance together in a circle also implies mutual trust. The degree of co-ordination required would mean the community had to gather at specific times, at specific places, and that members of the community would have to perform the same actions at the same time and in the same direction. The circle delineates territory and the participants are disconnected from the outside world, and focusing solely on the event which is taking place within the circle.

**Early Minoan II – The Chronological Context**

It appears that these features first appeared in the archaeological record in the EM I and EM II periods. This is not to say that these performances did not occur before this, but that by EM II they had achieved a significance which meant they would have been incorporated permanently into the tomb architecture. Thus EM II would seem to have a key role in the development of these performances. This leads to the question – why? What is happening in EM II that would lead to these developments, and does this help us understand why they arose? Changes in the social structure begin to appear across Crete during this period. If these performances are in some way a reaction to these developments, then what does the form of the specific performance tell us about the ideologies of these social groupings?

EM II can be divided into two periods, IIA and IIB. Most of the evidence I have previously discussed in regard to the tholos cemeteries and the main tombs at Mochlos and Gournia comes from EM IIA, as does the majority of the following evidence. EM IIB is much less well known in the ceramic record, making the history of certain tombs and cemeteries harder to understand. While some cemeteries in the northern part of the island disappeared, the Mesaran tholoi appear to have continued with less trouble, and Mochlos thrived during this period.

The EM IIA period in Crete seems to be a watershed period. There are major socio-political developments that lead to changes in the infrastructure and social organisation of society. Generally, we appear to be seeing an increase in economic activity as well as the development of monumentality and the beginnings of the institutionalisation of ritual.

There is evidence for the development of trade networks from EM I–EM IIA onwards, both internal and external. Internally, this is the first time there is a sizeable exchange in pottery, with sporadic Mesaran imports, such as fine grey ware pyxides, at Knossos and Poros Katsambas in the EM I period intensifying into large-scale interregional distribution networks. External trade is exemplified by the appearance of some of the first foreign contacts with the Cyclades, based on a small group of imported wares found at Knossos. Ivory is also first attested in the EM IIA period at Knossos, where a small segment of a hippopotamus tusk was found, presumably imported from Egypt.

In relation to this, the first evidence for seals appears in EM IIA, in burial contexts, such as Lebena, and also the settlement site of Myrtos Fournou Korifi. It has been argued that the development of sealstones marks a rise in the social role of the individual, at least for certain members of EBA society. Another factor which may bear this out is the change from large-sized, communal drinking vessels to the smaller, individual stemmed goblet. This has been interpreted as a development from communal, group feasting and drinking activities wherein the group would share the same cup, to ceremonies where the participants would have their own drinking vessel.

This development in drinking activities is also related to an increase in the appearance of “drinking sets”, found in large numbers at Knossos, which may suggest large-scale ritualised drinking (and eating) practices. This de-

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70 Garfinkel 1998, 226.
71 Brandes 1990, 32.
72 Garfinkel 2003, 87.
73 Garfinkel 1998, 228.
75 Wilson and Day 1994, 85.
76 Wilson and Day 1994, 85.
77 Krzyszowska 2005, 63.
78 Krzyszowska 2005, 60.
79 Branigan 1995, 38.
81 Driessen 2007, 89.
velopment in ritualised practice may be related to the development of monumental architecture which is attested in the EM IIB period. Although in the Mesara region the tholos tombs are the most monumental form of architecture, elsewhere in Crete there is evidence for impressive building works. During EM IIB, a monumental L-shaped platform was built at Knossos, as well as levelling at the site, undertaken in EM IIA to promote an ambitious building programme and large-scale reorganisation of the settlement, wherein the hilltop was levelled for further building and houses for settlement terraced on the slopes around it. A thin layer of white material, probably of EM IIB date, has been discovered in certain areas of the later palace, such as over the Central and West Courts as well as beneath the Throne Room complex, which could have been ritual in nature. Elsewhere on Crete, monumental walls have been found in buildings at Palaikastro and possibly Tylissos. At Malia, the earliest monumental architecture dates to EM IIB, including walls of the later West Magazines and an intriguing construction, finds from which include a gold bead and a sealing, found under the Hypostyle Hall. EM IIB at Vasiliki saw the introduction of a paved court measuring 20 by 20 m. 

These developments may be the result of population growth and settlement of new sites in EM II, and they may attest to the possible emergence of a form of central authority. In relation, the development of specific ritual “kits” and the introduction of gathering areas and ritual installations may also suggest an institutionalisation of ritual which corresponded with these social changes.

All these developments – the introduction of new tomb types in north Crete, the expansion of tholoi into other regions in south Crete, the development in external and internal relations on the island – may have created significant changes in the relations between social units, and interregional dynamics. The use and meaning of burial sites may have had to adapt to new circumstances, and the links between tomb community and kinship groups may have been reworked. At tomb sites, ideology was manipulated within funerary rituals via performance acts such as dance or procession, to either promote the development of social stratification or mask it under an outwardly unifying message. The growing population of this long chronological period meant that eventually such diverse ideologies would be subsumed as growing relations between settlements developed.

Conclusion

By analysing the performances inherent within these different social groupings, I would conclude that these social differentiations were not only visible in the material record, but were played out ideologically and cognitively through the use of dance and procession. Performance is closely linked to social and ideological structures, and as such an analysis of these can help us develop a more complex understanding of Early Minoan social practice and reality. In the face of growing social and political division and hierarchy and the institutionalisation of ritual practice that began to manifest in EM II, the social groupings of both South-Central and Northern and Eastern Crete reacted to this differently in regard to performative practice. In the south-central region of Crete, this growing divide was masked by performances that were reflective of a cosmological order which celebrated the group over the individual. In the north and east of Crete, however, these differences were embraced and embellished by performances which emphasised the individual over the group.

However, performance has been noted for what Finnegan has called “registers of artfulness” – meaning that performance may not truly represent social reality, but instead may be called upon to reproduce an idealised representation of reality. Thus, whether or not the communities of the Mesara or of northern and central Crete were truly egalitarian or hierarchical, institutionalised performances certainly intended to give the impression that they were, creating an embodied manifestation of prevalent ideologies, even though these ideologies may not have been truly representative of the status quo. As such, performances can give us a clue as to the mindset of these communities, showing us how they saw themselves, which has important implications regarding how we understand past

82 Branigan 1995, 35.
83 Schoep 1999, 270.
84 Driessen 2007, 79.
85 Schoep 1999, 270.
86 Driessen 2010, 558.
87 Driessen 2007, 88.
89 Driessen 2007, 91.
90 Legarra Herrero 2009, 41.
91 Finnegan 1992, 91–111.
Cretan societies, and gives us an insight into their worldviews and ideologies that other analyses cannot bring. As the Turner quote at the start of this paper suggested, by looking at, or “entering into”, performance acts at Early Minoan cemetery sites, we can learn more about how they saw the world and their place in it – perhaps we can get to know the Minoans a little better.

When combined with the traditional archaeological evidence from the two regions discussed in this paper – such as grave goods and tomb architecture – we can see how a performative approach to the past helps to create a more dynamic reading of the differences between the two regions. In one region, architectural space choreographs performances designed to minimise the growing social differentiation manifest elsewhere in the material culture; in the other, these differences are emphasised. By positioning the ideology reflected in the performative practices which emerge from an analysis of space and architecture against the material culture found in these locales, we can begin to unpack a more nuanced reading of the attitudes and identities of these communities. While performance does not hold up a mirror to these societies and reflect how they truly are, it perhaps gives us a more important reading of the past – through its reflexivity, performance allows us to see aspects of how past societies may have seen themselves. The durability of these performances – the tombs were used in these forms for nearly a thousand years – hints at the durability of these ideologies, that they were continually performed and articulated at these sites, and that these tombs and their architectural layout, combined with the physicality of the human body, continued to condition and effect social reality as it was perceived and acted out by the participants.
Bibliography


Cultural Performances at the Beginning of the Bronze Age


Performance Theory in Minoan Rituals and the Ambiguity of Minoan Symbols*

From early in the 20th century to nowadays, interpreting Minoan religion has been characterized by a general tendency to emphasize the importance of iconographic symbols so as to decipher religious symbolism behind them. Even though studying symbols and symbolism is indeed an essential process in order to understand Minoan religion, it is underlined here that such a tendency derives and at the same time enforces the epistemological distinction between thought (i.e. religious beliefs) and action (i.e. ritual) by stressing the first and ignoring the latter.

Modern anthropological research has highlighted the fact that religious symbols can be very ambiguous and unclear to the participants of a ritual practice, in contrast to a ritual ceremony which most of the time is widely understood and can be applied without needing a specific conceptual background. The results of these studies lead to a gradual shift from the ambiguity of symbols to the importance of ritual practice as a basic interpretive scheme and not a secondary analytical tool.

The fundamental principles of *performance and practice theory* conceptualize ritual as: a) an event characterized by inter-subjectivity and efficacy, b) a liminal action performed through human bodily senses, and c) a practice consisting of durable dispositions (habitus), which are reproduced through repeated bodily antithetical schemes and movements, aiming at the creation of ritualized agents, i.e. persons who have the ability to deploy this ritual knowledge in non-ritual situations.

In this context, the present paper examines: a) the vulnerable elements of previous Minoan studies which focused on the analysis of symbols and symbolisms through iconography, b) the new ideas that *performance theory* introduces in the analysis of religious structures, and c) the potential of an application of these new perspectives in the archaeological record of Minoan ritual structure.

**Methodological Problems in the Study of Minoan Religion**

According to Peirce everything that exists in the inner or outer human world falls into three wide categories which actually represent three types of situations: feeling, action, thought. The first one (*firstness or likeness*) corresponds with the self-contained existence of a sign, which is everything that can exist as an individual form or feeling, that is an *icon*; the second category (*secondness or index*) corresponds with a dualistic mode of existence of a sign, which is its relation (conflict, difference, reaction) with a second sign, which then produces an action; the last category (*thirdness or symbol*) corresponds with a triadic mode of existence of a sign, where a third sign (*symbol*) interprets the relations between two signs, such as a net of religious beliefs.¹

All three categories are necessary in order to grasp the understanding of things because, a) the sign as *icon* has its qualities resemble those of an object but it stands unconnected with it in terms of a relative concept, and b) the sign as *symbol* is connected with its object by virtue of the idea of the symbol, nevertheless no combination of words would be able to clarify with any certainty this idea. Thus for the identification of an object and the formation of an idea the *secondness* of a sign is needed: the signs that are situated in experience and practice can issue “functional” instructions in the manner of an index evoking memories and exposing previously masked stored information.²

Following Peirce’s categories it becomes obvious that Minoan archaeology has focused on the level of firstness and image and has used this first level in order to reach the level of thirdness and symbolism, neglecting the mediating and significant level of secondness and practice. In most cases iconography on seals, signet rings, lamakes, wall paintings and/or vases has been regarded as a direct source of information concerning the structure and organization of religious institutions in Minoan times. Furthermore, the objects are characterized as “sacred” or “ritual” regardless of their specific uses, dates or architectural contexts, only because they bear specific representations,

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which for some vague reason correspond to hazy religious beliefs, such as the “Great Goddess”, the “Young God” etc. A series of objects and figures, as the double axe, the pillars, the offering tables, the figurines, the bull, the octopus, the snake, the cross and many more are regarded as religious symbols through a chain of assumptions. For example, in the case of depictions of the “Great Goddess”, a vicious interpretive circle can be detected: all the natural features that are associated with the goddess (poppies, doves, snakes etc.) are characterized as “sacred” symbols only because they accompany the feminine figure in the representations; conversely, the goddess is interpreted as such because she is depicted along with some of the features that are regarded as “sacred” symbols. It is very hard to detect the reason why the specific features are indeed “sacred”: if the feminine figure “modifies” the features in sacred symbols, how can it be affirmed that the figure is a goddess? If the features assign sacred attributes to the figure, how can the sacredness of the symbols be established?

In other words, archaeological reasoning for Minoan religion suggests that objects bear symbols which are regarded as “religious”, because they refer to some religious symbolism, which are part of a wider net of religious beliefs detectable through the iconography. Nevertheless, there are valid doubts in the process of establishing with certainty an analogy between some representations and religious beliefs, as is also doubtful that iconography can on its own establish that the specific Minoan religious beliefs are the ones we consider them to be. The present criteria for the iconographic identification of the gods, as is the “unusual” body stance, the “unusual” gesture of the figure or the size of the figure, reflect more our knowledge of the iconography and the written documents of the classical period than Minoan religious reality.

To summarize, the methodological problem in most studies of Minoan religion is the fact that researchers focus heavily on iconography, which results from an exaggerative emphasis drawn upon the cognitive aspects of Minoan symbols. We assume in an arbitrary way that religious symbolism was conceived in the same ways by all participants, that religious symbols were structured by religious beliefs and they were transformed only when religious beliefs were also changing. Nevertheless, just as it is misguided to ascribe monolithic conjunctions to symbols and symbolism – for example the bull as a totemic symbol of power or the dove as a personification of a goddess –, so too is the view that all religious symbols can be clear to participants or interpreted by them in similar ways equally problematic.

Much evidence in anthropological studies has challenged the traditional association of belief and ritual. Fernandez has stressed the different ways in which ritual symbols can be understood by participants, even if in the end ritual succeeds in some sort of social solidarity, which means that any outcome of a ritual does not necessarily depend upon shared information or beliefs. Many authors attempted to identify the ambiguity of ritual symbolism, even to deem that such ambiguity may be essential to specific rituals. For example, Cohen has drawn a distinction between the existential and political dimensions of symbols highlighting that the “multidimensionality” of symbols is essential to existential as well as to political issues. Accordingly, Turner regarded the symbol as the smallest unit of transformation and integration effected in ritual distinguishing two poles in symbols, the sensory and ideological pole, between which there is an interchange, by which the sensory pole experiences the ideological pole as

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3 Nilsson 1950, 262–74, 350–1, 421–2; Alexiou 1969, 97–8, 103.
6 Cohen 1979, 87–113.
have tended to privilege belief as a cognitive and subjective phenomenon.\textsuperscript{11} He argues that it is only with the rise of modern science and the privatization of religion that it makes sense to see religion as a state of mind rather than as practical knowledge of institutions that orientates activity. Regarding religion in prehistoric societies as a sphere quite separate from where the action is, means that we actually ignore the processes by which symbolisms are constructed and used. Many religious traditions have little interest in individual belief and they may accept differences of interpretation as long as practices themselves remain consistent.\textsuperscript{12}

In the next pages it will be demonstrated that by focusing methodologically on ritual (action) new horizons in the way we interpret material culture as “sacred” may be opened, as well as in the way we reason ritual’s outcomes, challenging the assumption that ritual directly affects the wider social reality. Instead of regarding sacral as a system of symbols and symbolisms and dealing with ritual objects as religious symbols and embodiments of religious symbolisms and beliefs, it would be more useful to emphasize ritual practices themselves by perceiving Minoan religion as a series of ritual performances: “there are no symbolic meanings going through their minds when they are engaged in performing ritual … Ritual, then, is primarily activity. It is an activity governed by explicit rules. The important thing is what you do, not what you think, believe or say”.\textsuperscript{13} It will be shown that, contrary to iconography, the potential of other aspects of material culture, which are strongly connected to physical movement, theatrical presentation, structure of space, and sensuous responses, as is architecture, reveal a great deal concerning affective, sensitive, and sensory aspects of a cultural reality, as is also the case with ritual and religion. Although architecture has often been perceived as a manifestation of urbanism and social hierarchy, it is here suggested that its potential in creating and negotiating cultural reality through ritual, although neglected, is very promising.

**Basic Principles of Performance Theory**

Performance studies, which emerged in the 1970s, combined ritual theory inspired by Victor Turner’s notion of the ritual process with theatre studies,\textsuperscript{14} attempted to displace the distinction between non-Western ritual activity and Western performance. In particular, they signaled a shift of analysis from the semantic meaning of symbols to the conditions under which symbolic acts are meaningful\textsuperscript{15} and emphasized that, a) ritual is defined by “the performance of more or less invariant sequences of formal acts and utterances”,\textsuperscript{16} and b) such acts and performances constitute “the most concrete observable units of the cultural structure”.\textsuperscript{17}

Although there is a tendency in anthropological studies to polarize epistemologically performance and practice as two distinct approaches, many would argue that the common components between these two aspects are much more profound. Both interpretive schemes underline that ritual should be understood in its real context – that is, the full spectrum of ways of acting within any given culture – and not as some \textit{a priori} category of action totally independent of other forms of action.\textsuperscript{18} Furthermore, both approaches emphasize the importance of practice and human agency: “by virtue of a shared concern to deal with action as action, all of these theoretical orientations [performance theory and practice theory] can be loosely grouped as \textit{performance approaches} to the study of religion”.\textsuperscript{19} Moreover, both orientations agree that strategizing to establish systems of domination and inscribing value-laden schemes to the body is one of the tasks that all rites engage in to some extent.\textsuperscript{20} Finally, both schemes focus on the physical mind-body holism emphasizing the dynamic of individual agency in addressing and manipulating the values and structures of a contradictory world.\textsuperscript{21}

In accordance with the various debates in performance studies, the present research regards ritual as a) an action not dependent on religious beliefs and myths, b) an event structured by the participation of all agents, who act in

\textsuperscript{11} Asad 1993, 41.
\textsuperscript{12} Keane 2008, 117.
\textsuperscript{13} Staal 1979, 3.
\textsuperscript{14} Turner 1969; Schechner 1977.
\textsuperscript{15} Wuthnow 1987, 344; Bell 1997, 74–5; Grimes 2004, 135.
\textsuperscript{16} Rappaport 1979, 175.
\textsuperscript{17} Singer 1959, xii.
\textsuperscript{18} Bell 1997, 81; Grimes 2004, 135.
\textsuperscript{19} Bell 1998, 205.
\textsuperscript{20} Grimes 2004, 125.
\textsuperscript{21} Comaroff 1985, 196; Bell 1997, 83.
an inter-subjective situation, c) a liminal in time and space action which is performed through the senses of human body, and d) a practice which produces ritualized agents through a series of predispositions and repeated antithetical movements of human body in space, affecting in an indirect way the structure of cultural and social values.

**Ritual as a Cultural and Inter-subjective Event**

The dissociation of ritual from religious beliefs brings out ritual as an event, that is a set of activities that does not simply express cultural values, but actually effects changes in people’s perceptions and interpretations; as Richard Schechner puts it, “ritual’s actions are not make-belief; they are make belief”.\(^\text{22}\) According to performance theorists, culture is a vivid and endless totality, which lives, breathes and changes during performances, as are ritual practices, and these performances are the specific and particular manifestations of culture aside from which culture is just an abstract category.\(^\text{23}\)

Given the fact that culture is not a stable net of deciphered symbols and ritual is not a “window” through which detached observers can approach the cultural values of a society, performance theory rejects the division between “outer” observers and “inner” believers and underlines the active role of all participants in the structure of a ritual practice. During ritual practice participants feel (not necessarily understand) a situation of inter-subjectivity, which means that each may have a different role, but all of them are performers constituting ritual.\(^\text{24}\)

During ritual performances and especially during moments of emotional intensity and communion every participant brings his own world, that means his ideas, emotions, memories and subconscious and at the same time he is directly or indirectly influenced by the rest of the participants. It seems that through a unique situation of inter-subjectivity the impressions and reactions of the believers converge. This practice, which is actually an unconscious experience, rather than a conscious procedure, highlights that the participant can adopt a new form of consolidation of ritual, which is affected by personal impressions, emotions and memories. In this context, symbols, beliefs, symbolisms, myths etc. do not constitute changeless factors, which characterize the sacredness of the objects, but their content is defined by steady and/or experimental human agency.

**Liminality and Sensual Symbols**

Probably the most significant aspects that performance theory highlighted were the notions of the body and liminality as major analytical tools. Performance theorists suggest the importance of the body over the abstraction “society” and they describe a pre-conceptual structuring of experience, which in turn structures the conceptual categories with which human beings think. Liminality is a term that Arnold van Gennep first used at the beginning of the 20th century to correlate geographical progression with the ritual marking of cultural “passages”. Van Gennep himself defined rites of passage as “rites which accompany every change of place, state, social position, and age”.\(^\text{25}\) These transitions are marked by three phases: a) separation, b) margin (or limen signifying “threshold” in Latin), and c) reincorporation. The phase of separation signifies the detachment of the individual or group either from an earlier fixed point in the social structure, from a set of cultural conditions, or from both. During the intervening liminal period, the ritual subject passes through cultural realm that has few or none of the attributes of the past or coming state, while in the final phase, the ritual subject is expected to behave in accordance with certain ethical standards.

Based on van Gennep’s model, Victor Turner developed critical aspects of the notion of liminality, emphasizing the polysemy and the relativity of symbols and symbolisms, analyzing the relation between ritual practices and social change, and establishing that ritual involves not only repetition but also much extemporization: ritual transforms its carriers, who in their turn form the ceremony.\(^\text{26}\)

In his early work, he applied a highly functional methodology in interpreting ritual, regarding it as social drama, which is a rational process that restores social conflicts. Turner detected four continuous phases of social drama: a) split-up with tradition (norm, ethos, law, behavior, taboo etc.) which is caused by a social group or subject, and

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\(^{22}\) Schechner 2007, 25.

\(^{23}\) Goffman 1969; Grimes 1976; Tambiah 1979; Turner 1982; McAloon 1984; Wuthnow 1987; Schechner 1994; Carlson 1996.

\(^{24}\) Garrigan 2004, 54.

\(^{25}\) van Gennep 1960, 14.

which b) leads to crisis (of social structure, worldview, social consensus etc.), c) causing different attempts of mediation and restoration of social order by other social groups, such as using ritual means (superstitions, sacrifices, exorcisms etc.), which in turn leads to d) either reconciliation (restoration of tradition) or perpetuation of split-up.27

Nevertheless, in his later research in the 1960s, which was heavily influenced by van Gennep’s work, Turner recognized that ritual in a human society is related to complex social and psychological processes. He acknowledged that ritual is (re)generated in a liminal phase (a phase of chaos), during which social order and structure is being comprehended. During these liminal phases and the repeated experiences of social dramas (dreams, philosophical thought, theatre, ritual practices etc.) social reality is being recomposed and freely recreated. In this context, the ultimate aim of ritual is to destroy reality and reconstitute it as new. Thus, in Turner’s model ritual activity is regarded as restoration of social experience, where “restoration” does not necessarily mean regression to the old, but composition, self-awareness and elaboration of wider social meanings and mechanisms. For him, ritual performance elaborates a series of liminal processes from one state of being to another, which are all correlated not only with space, but also time (such as seasonal celebrations, private celebrations etc.), and social and physical human change (birth, marriage, death, etc.).28

The dynamic components of liminality are: a) communication of symbols in the form of exhibitions of sacred articles (“what is shown”), actions (“what is done”) and instructions (“what is said”), b) deconstruction and recombination of familiar cultural configurations, where familiar objects are often presented in distorted forms (in smaller or larger shape, in different colors) provoking the ritual subjects to reflect on the basic values of their social and cosmological order, and c) simplification of the relations of the social structure, meaning that between the ritual subjects socio-structural distinctions disappear in favor of an absolute equality (communitas) leading to new cultural and social associations (anti-structure).29

In this context, symbols are bipolar, referring to sensory experiences on the one hand and ideological or normative values on the other;30 continuous sensual experiences, which are intensive bodily contacts with symbols, contribute in incorporating and thus consolidating and negotiating the cultural and social values of a society. The mobilization of such symbols in ritual and the orchestration of the sensory experiences associated with such symbols, can effectively embed their ideological values into people’s consciousness, endowing the ideological with sensory power. Ritual then becomes a “mechanism that periodically converts the obligation into the desirable”.31

**Habitus, Meta-Communication and Ritualization**

By emphasizing the body as a structuring force of symbols and ritual, we focus on the dialectical relationship between the body and a ritual space: the body generates the ritual space and it is molded by it in turn.32 Through a series of physical movements ritual practices spatially and temporally construct an environment organized according to schemes of privileged oppositions. These schemes are generated by the gestures and sounds of the body and act to structure the physical environment.33 A set of oppositional schemes comes to be related to another set: right-left may be analogized to inside-outside or good-evil, while male-female may be linked to right-left or front-back.34

This is a circular process, which may not be perceived, and could be characterized as habitual. By means of habitus – that is, a system of durable and transposable dispositions which is referring to structuring principles, as well as to different cultural meanings – Bourdieu explores the mediation of the body as a “dialectic objectification”: the body becomes the locus for the coordination of all levels of bodily, social, and cosmological experience; this coordination is effected only in and through schemes that pass “from practice to practice” without becoming explicit either in personal consciousness or in social discourse.35

It is argued here that the concept of habitus, the embodied oppositional schemes, and their interaction with the environment are all correlated to the process of framing. The term, which was first explored by Bateson,36 indicates

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27 Turner 1957.
33 Bell 1997, 81.
35 Bourdieu 1977, 87.
36 Bateson 1972.
the way in which some activities or messages set up an interpretive framework within which other subsequent or simultaneous acts or messages are to be understood. From this point of view, frames constitute an “unconscious” form of communication, which he called meta-communication. Bateson underlines that it is the frame placed on a ceremonial blow that makes it clear whether one is initiating war or making peace or it is framing that enables one monkey to hit another and have it understood as an invitation to play and not fight.37

Reading into Bateson’s theory, it can be established that the concepts of habitus and frame are closely associated, providing a new dimension to the approach of ritual practice. Habitus in its ritualistic aspect as a series of repeated oppositional schemes may be transferred from one situation (frame) to another and may create or transform interpretive environments. Specifically, the continuous reproduction of a number of embodied oppositions, such as left/right or up/down, may structure an interpretive environment (frame), as are the different roles that females and males undertake in ritual practice. In turn this interpretive frame (e.g. the ritual environment which is structured by an embodied oppositional scheme and a cultural opposition) may create and interpret more environments of different nature, such as non-ritual situations. Thus, the (re)production and transportation of cultural values and habitus – here concerning ritual – can be followed through their alternation and application in a variety of interpretive contexts and practices, that is via the meta-communication of ritual schemes.

Given the facts that a) human practices are meaningful in that they create complex interpretive frames of human action and thought and that ritual schemes may meta-communicate creating a variety of ritual and ritual-like frames, b) ritual frames are structured by a set of oppositional physical movements and body stances which in turn may construct whole systems of religious symbolisms and hierarchies, and c) these procedures are more likely to take the form of an unconscious sense, rather than that of a conscious communication, it can be suggested that there is a significant phase between performing ritual practices and structuring social hierarchical systems, which is the phase of ritualization. I would interpret ritualization – a term used by Bell – in a more performative manner, as a liminal phase which plays an important role in meta-communicating the relative frames. From this point of view, ritualization comes to bridge the gap between ritual frame and the frames that are being created in the wider social reality; it comes into play as a meta-communicative mechanism which structures a variety of interpretive environments. Ritualization is indeed the ability to deploy the schemes internalized in the ritual environment in the wider social context, not in order to render non-ritualized situations more in line with the values of the ritual schemes and capable of molding perceptions, but in order to create and reproduce interpretive frames in which people may meta-communicate, that is, they may freely interpret and reorganize their social reality.

Bell is right in pointing out that ritual is more complex than the mere communication of meanings and values in specific ways and that ritual is the primacy of the body moving about within a specially constructed space, defining and experiencing the values ordering of the environment.38 Nevertheless, the results of this sort of ritual procedure can be meta-communicated, in order to have some affect upon cultural and social reality: the result is the production of ritual agents who have acquired an instinctive knowledge of schemes that can be used in order to transform non-ritual environments and structure them as ritualized or ritual-like interpretive frames. In this context, and following Lakoff and Johnson, any process of condensation of categories into a sign/symbol proceeds from the way in which the body experiences and projects antithetical schemes. In Lakoff’s “middle-level categories” people appear to experience the maximum sense of “fit” between the inherent folk categories and the world as they experience it; people’s categories are experienced as real, verifiable by experience, and sufficiently stable to be the building blocks of shared knowledge systems.39 Kinesthetic image schemes, which are a set of pre-conceptual structures, are relatively simple structures that constantly recur in bodily experience. Such schemes, as within-without, center-periphery or up-down, form the experience bases of metaphorical projections of these images to create abstract ideas. In that way, describing ritual practices as communicating by means of modeling an image that can act as a sign/symbol is not enough, but the sign/symbol molded by these schemes in the course of the ritual activities is part of the frame created by ritual practice and is unconsciously impressed on the participants. In other words, any process of condensation of categories and relationships into a sign/symbol proceeds from the way in which the body experiences and projects non-propositional schemes.40 In that case, the application of different symbolic/antithetical schemes to a single object is a process that takes place during ritual activity and defines the ritual character of an object.

37 Bateson 1972, 179–89.
38 Bell 1997, 82.
Efficacy, Subconscious and Structure of Cultural Values

Functional anthropological studies approached religion and ritual in rational terms and specifically as cognitive mechanisms which could organize human thought, along with other conceptual classification systems. Robertson Smith, Durkheim, and Mauss regarded religion as a product of social life and nothing more than a symbolic representation of the social order. Accordingly, Radcliffe-Brown analyzed how ritual activities function and what they mean and believed that groups organized in particular ways were corresponding images of god, spirits, death, fertility etc., all of which functioned to express and maintain the social structure. Lévi-Strauss saw totemism as evidence for how cultural classification systems are rooted in a particular cognitive process, in which the contrast between nature and culture is the most fundamental of the binary oppositions that organize human thought. Even culturalists, such as van Gennep, argued that rites serve to order chaotic social changes, which means that rituals are the means for changing and reconstituting groups in an orderly and sanctioned manner that maintains the integrity of the system. In accordance, Leach underlined that only ritual can transform a boy or a girl into an adult, an animal into a gift to the gods etc. while still maintaining all the boundaries that enable these categories to organize reality. Gluckman regarded ritual as the arena in which purely social conflicts are worked out, and Firth argued that ritual provides “for the routinization and canalization” of personal and social tensions.

The notion that religion is a normative social institution, namely a conventional strategy for succeeding and maintaining social coherence, oversimplifies such a complex cultural and psychological aspect of human life. If religion and ritual aim at a social unity and socio-political concurrence, then inner and contradictory personal routes which are activated during or even after ritual either do not really matter or they are just aiming at a communal/social calmness. In both cases performance theory has stressed the active role of the agent/participant and has recognized that the occasional and inter-subjective feature plays a basic role in the structure of ritual performances. Post-modern approaches, such as those of performance theory and the anthropology of senses, have focused on the psychological and cultural aspects of ritual. Performance theorists have underlined the efficacy of ritual activities, which distinguishes them from literal communication or pure entertainment. Most of them agree that an effective or successful ritual performance is one in which a type of transformation is achieved, for example the deceased who becomes an ancestor. In other words, the concept of efficacy suggests that ritual does what it does by virtue of its dynamic and physical characteristics. For example, for Turner the efficacy of ritual is that it succeeds in “destroying” cultural (and social) reality and in recomposing it as a new one. According to him, ritual can experiment with features of social reality and affects socio-political structure by eliminating, for example, the ideological power of a prevalent social group. Such an anti-structure which is created by ritual practices is not just a reversal of a social status quo, but is rather a cultural experimentation with other realities. Thus ritual becomes a part of a wider process through which community is continuously revising and renewing itself.

An approach of ritual as a performative event structured by senses, body, oppositional schemes, subjective creativeness, liminality, regards ritual as a “passage” which directs participants in the cultural core of their society with an attitude not only to renegotiate it, but mainly to regenerate it. Ritual practices are not merely expressions or enactments of concepts, but are experiences to which people respond with intuitions and interpretations and can become sources of new intuitions, habits, and concepts. In other words, ritual and ritualized practices can become a gate to personal and cultural abyss and give people the opportunity to doubt their institutionalized world and create a new cultural reality.

The ways in which ritual and ritualized performances may cause cultural fermentations are subconscious. The formative dynamic of subconscious, which mainly consists of endless and inexhaustible instincts and feelings, comes from its ability to auto-transform, which means to produce and reproduce deeply rooted human desires by engaging features of the real world. I would suggest that this creative procedure, which is not normative but more

41 Durkheim 1965; Durkheim and Mauss 1967; Robertson Smith 1969.
42 Radcliffe-Brown 1945, 33–43.
43 Lévi-Strauss 1963.
44 van Gennep 1960, 189.
45 Leach 1968, 524.
48 Puchner 1984, 15.
49 Keane 2008, 123.
or less experimental, can be activated by ritual practice. In this context, ritual ceremony becomes not an institution for socializing human beings and thus a strategy of reconciliation in a world of well-organized social values, but a real situation which provides the tools for a deeper (personal and communal) transformation. Ritual as a real situation from which the subconscious, having engaged elements for its creative reproduction, opens up a new dimension of this performance where every movement/stillness, sound/silence, lightness/darkness stimulates the creative dynamic of human subconscious and at the same time reinforces the structure and consolidation of new desires, cultural schemes and symbolisms.

The outcome of such a contact with the subconscious is rather unpredictable, as there is the possibility of an affirmation of a specific organization, as well as the possibility of a total breach with cultural and personal fixed values. During a ritual the participant senses that the social structures, which have been enforced upon him since the day he was born, do not provide him with the meanings his subconscious needs.  

**Back to Minoan Archaeology...**

All the above has served to demonstrate that archaeological research has focused on deciphering symbols and tracing religious beliefs mainly through iconography which is the result of an epistemological choice, that is, enormously emphasizing thought – hence, religious beliefs – rather than practice – thus, ritual. As was shown, it is currently becoming obvious in anthropological research that iconography as well as religious beliefs constitute vague sources for approaching religion in general and particularly Minoan religion. Performance theory has made evident that a definition of religion must include concepts of ritual, practice, agency, human emotion, cultural efficacy, inter-subjectivity, and therefore, shifts the emphasis to aspects of material cultural which are strongly connected to physical movement, theatrical presentation, structure of space, and sensuous responses, as is architecture. In this context, it is stressed that architecture can reveal much information on affective, sensitive, and sensory aspects of a cultural reality, as can religion.

The ways in which the above anthropological approaches could shape a methodology for archaeological reasoning and interpretation of Minoan ritual could be a topic for a long discussion that would definitely be worth the effort. I would suggest that there are two “key” issues which could direct our study of Minoan ritual: a) not to have the illusion that ritual performances which took place in Minoan times and places could have a direct impact on the social reality of the time; rather, it must have constituted a complex procedure that may have affected each participant who in turn renegotiated his personal and cultural values in such a way as to lead him towards long-term cultural and perhaps even social change, b) purely materially, to focus on the potential of architecture.

Architecture is definitely the most visible and powerful means both for expressing and for stimulating religious sensibilities. It should be kept in mind that just as the timing of rituals is a crucial matter, so too is the configuration of the space in which rituals are performed. The interaction between built forms and ritual activities is both more intimate and much more complex. The monumentality of architecture, the bodily movement from space to space, the oppositional routes in the buildings or from building to building, the role of finds in highlighting these oppositional schemes, the combination of ritual practices with daily activities, such as product manufacture, storing or serving, which provide a sense of a ritualized situation, the sensual contact with objects which through ritual become symbols, all are basic features in understanding Minoan religion which can be revealed through careful contextual and architectural research.

As monumentality is structured a) in a semantic way, through repeated, dramatized bodily movements, which include a series of oppositional schemes (inside/outside, upwards/downwards, light/dark, open/closed etc.) and of liminal-transitional zones, and b) architecturally, by one or more central spaces with controlled passages and surrounded by other building areas, it seems that Minoan monuments may have become a “stage” for rituals and ritualized practices of a more or less theatrical type. Instead of imagining some sort of stability between built forms and their meanings, it would be more fruitful to think of architectural meanings, such as those that arise in a ritual, situational or “eventful” context. That is to say, architectural meaning is not a quality of the built form itself; instead, the meanings arise from situations or **ritual-architectural events**, wherein people engage objects and architecture in a kind of dialogical exchange.  

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51 Kastoriadis 1995, 276.
52 Jones 2007.
The challenge is to shift the frame of reference to the level of experience, especially experience in the context of ritual action. Every built form of consequence operates like a multivalent symbol insofar as it evokes different meanings and responses from different audiences. Especially long-enduring monuments – like Minoan palaces or Minoan monumental funeral buildings – are to a significant extent “autonomous” insofar as they invariably exercise a kind of freedom that enables them variously to transcend and/or undermine the original intentions of their builders.53 In this context it is not at all self-evident to presume that there is one single “real meaning” of a building which was intended by the original builders, while all other understandings and usages are dismissed. Thus, meaning is not a condition or quality of the building, of the thing itself, but meaning arises from situations.54 Instead of moving toward a supposed “objectivity”, we could focus on to what might be going on in ritual-architectural situations.

Following Jones’ morphology of ritual-architectural priorities,55 some aspects of architecture could shed light on ritual-architectural events in Minoan times. Jones has distinguished three basic tasks in architecture in order to connect it to ritual-architectural events: a) architecture as orientation (task I) which includes the variations of homology (I–A), convention (I–B), and astronomy (I–C); b) architecture as commemoration (task II) raises questions about the content of the subsequent ceremonial occasions and specifically about the themes of divinity (II–A), sacred history (II–B), politics (II–C), and the dead (II–D); and c) architecture as ritual context (task III) explores the modes of presentation that are issue in various ritual-architectural situations, such as the theater (III–A), the contemplation (III–B), the propitiation (III–C), and the sanctuary (III–D).

Undoubtedly in Jones’ scheme task III would be of great significance for identifying ritual events according to performance and practice theory. In the variation of theater the attention shifts to ritual-architectural configurations that serve as backdrops or stages for the performance and spectator viewing of ritual dramas.56 This includes the presentation of ceremonial performances on a fixed podium or stage for a similarly stationary assembly of onlookers and/or ceremonial movements along processional ways or parade routes in which onlookers had participated by moving along. In the variation of contemplation, in which circumstances that direct reliance on architectural features are considered,57 it would be useful to emphasize splendid architectural forms and features which could transport worshippers from the material world into a blissful immaterial realm. Finally, in the variation of sanctuary, where exclusiveness or restricted access in the form of ritual architectural configurations provide refuges of purity, sacrality, perfection, redemption etc.,58 we could explore issues concerned with the sanctification of a place, such as if sanctuaries effect a complete rejection of society, if they display an exemplary model of society or if they provide a mechanism for hierarchical exclusion.

In general, it is the physical act of moving our body through meaningful environments that unifies the senses and that brings together the local past with the present experience.59 Architectural monumentality can affect and at the same time be affected by the production of memory and the act of remembering which is being constructed by the process of bodily movement. In the end it becomes some sort of memory movement.60 By moving, we are in a dialogue with our environment; both literally and figuratively, we re-situate ourselves into our story. This is especially the case if we revisit routes coloured with meaning and of particular importance – this can be on both an individual and collective level. And this is true because it is not just the act of moving, but the emplacement of the move that re-evokes our remembering, where emplacement suggests the sensuous interrelationship of body-mind-environment.61 Memory is not merely activated through the visual surveillance of landscape, but by our bodily movements, of being in and engaging with the physical and sensory environment. Understanding places as constituted by movement, Lee and Ingold describe: “We cannot simply walk into other people’s worlds, and expect thereby to participate with them. To participate is not to walk into but to walk with – where ‘with’ implies not a face-to-face confrontation, but heading the same way, sharing the same vistas, and perhaps retreating from the same threats behind.”62

53 Jones 2007, 257.
54 Jones 2007, 259.
55 Jones 2000.
56 Jones 2000, 188–212.
60 Pink 2009.
61 Howes 2005.
62 Lee and Ingold 2006, 67.
Bibliography


Seemingly moving figures are very common occurrences in Aegean Bronze Age iconography. The vividness of the images is such that, often, these figures have been described as engaged in “ritual”, “religious” and “ecstatic” choreographies. These interpretations, first advanced in the early twentieth century, have been widely adopted throughout the years and, in certain cases, have consisted of the foundations for wide and long-lasting views on Minoan ritual. However, since the publication of later twentieth century stylistically-orientated analyses of Minoan imagery, new light has been cast on the essence of movement in various representative media. Since, it has been agreed that movement is a ubiquitous compositional feature of Aegean Bronze Age depictions, which might possess a predominantly stylistic function over a narrative one. Archaeologists are therefore faced with a range of questions related to the realities of identifying dance in Aegean two-dimensional imagery. Are the figures actually depicted as dancing, or is it their stylistic rendering which leads us to think so? Moreover, the subsequent and inevitable accumulation of further questions regarding the essence of dance, its distinction from other types of performance and the dynamics of representing it in still imagery demonstrate that some rather large assumptions were made about Minoan dance in the initial studies on the subject. This paper outlines and addresses some problems these accounts currently present, while briefly suggesting some alternative possibilities for what the studied glyptic scenes might have depicted, if not dance. Given the scope of this chapter, this article consists of more of a commentary than a deep analysis; some preliminary thoughts on whether it is indeed possible to identify dance in still two-dimensional Aegean Bronze Age iconography are advanced.

“Elizabeth McCausland voiced the paradox when she called for ‘an image which though it cannot move and never can hope to move, yet will seem about to move’.”

William Ewing (1987)

Identifications of Dance in Aegean Bronze Age Iconography

During the early twentieth century, Evans, Persson and Nilsson identified the presence of dance in a range of Minoan frescoes and Aegean Bronze Age glyptic depictions. Alongside the “Sacred Grove and Dance” and the “Dancing Lady” frescoes from Knossos, Evans qualified the Isopata, Vapheio, Second Kalyvia Rings, the Ring of Mycenae, and a gem from Vapheio (fig. 1) as dance scenes. Persson and Nilsson additionally noted the presence of this activity in the Dendra-Midea, Hagia Triada, Mycenae, Ashmolean rings and in a seal impression from Hagia Triada (fig. 2). All three authors agreed that the scenes represented ritual events, carried out in celebration of the annual rebirth of agrarian fertility. Moreover, owing to the figures’ seemingly euphoric and ecstatic bodily demeanour, the ritual dances were interpreted as orgiastic in nature.

Three overarching criteria allowed Evans, Persson and Nilsson to identify dance in these scenes. The first consisted of the depiction of movement in the figures’ clothes and hair. Evans argued that these features indicated “quick, rhythmic movement” characteristic of dance moves. Similarly, Persson’s and Nilsson’s respective observations of “violent motion” and “tresses tossed about” contributed to their conclusions. The second was their performance of a range of recurrent gestures. Consisting of positioning the palms in a parallel position to the hips, raising them up and outwards in a variety of angles, or clenching one or both fists over the chest or the abdomen, these gestures were regarded as elements of ritual dance. Lastly, the third criterion for identifying dance was...
the symbolically and ritually laden contexts in which the figures were depicted. The settings, such as paved courtyards containing one or several trees, baetyls or shrines, in which floating symbols such as the eye, ear, butterfly or double axe appear, were regarded as adding to the cultic character of the activity and therefore allowed it to be differentiated from more practical tasks represented in other glyptic depictions.

It is conspicuous that the aforementioned authors’ interpretations strongly influenced other views on the nature of ritual performance in Minoan archaeology. In fact, Evans’ account on the Isopata Ring served as a basis for many discussions on Minoan epiphany rituals. Moreover, it is noticeable that Evans’, Persson’s and Nilsson’s use of criteria for identifying dance prevailed throughout the rest of the century and carried into the beginning of the twenty-first. For example, it has been argued that the “ecstatic or orgiastic dance” performed by the male figure in the Ring of Mycenae was best rendered by the movement of his body and his flailing gestures. Similarly, the occurrence of a circular dance in two sealings from Isopata and Khania has been recognised from two figures holding hands near a cult building.

Revisiting Evansian Theories and an Art-Historical Approach to Movement

In recent years, however, Evansian theories, and particularly those related to ritual, have become increasingly revisited. While dance itself has been parsimoniously discussed in this field, the nature and purpose of Minoan performances has nevertheless been subjected to some debate. Many of Evans’ views on the Minoan past, such as those related to the Mother-Goddess, and his methodological approaches, largely consisting of universal comparisons between different cultures, are presently outdated. Hence, reading Evans’ interpretation through the lens of current theory and practice, some of his approaches to and statements on Minoan glyptic – such as the ring of Mycenae representing a dance in celebration of the Goddess given the gestures’ parallel with American Indian ones – are becoming increasingly difficult to justify.

While trance and ecstatic behaviour continue to be topics of interest, perspectives on what altered states of consciousness consist of are changing. Morris and Peatfield, for example, suggested that rather than symbolising ritual situations such as the occurrence of an epiphany, certain Aegean Bronze Age images might have instead represented the techniques for achieving trance. These techniques, in the authors’ view, involve slow repetitive movement or stillness rather than dance. In remarking upon the Isopata Ring, Morris and Peatfield argued that while the figures’ bodies are expressive of movement rather than rest, in the absence of other indicators for ecstasy, “a more limited rhythmic movement or swaying might be suggested”.

Moreover, stylistically-orientated explorations of Minoan iconography have shed some new light on the representation of movement, and consequently allow for Evans’, Persson’s and Nilsson’s interpretations to be challenged. Essentially, these studies highlighted the ubiquity of the “unexpectedly daring” movement in Aegean Bronze Age iconography. Groenewegen-Frankfort, for example, noted that the intrinsic kinetic energy contained within the motifs of the petaloid loop, the circle and the dot, amongst others, created a strong impression of movement in the depictions. She moreover argued that these impressions might not necessarily have been rendered with a narrative purpose, and might have been of a stylistic and aesthetic nature. Thus, the presence of the aforementioned – highly recurrent and typically Minoan – motifs in figurative narrative scenes may not have

7 Cain 2001, 46.
8 Ulanowska 1993, 117.
9 Krattenmaker 1995, 120.
10 See e.g. Wedde 2004; Cain 2001; German 2005.
11 Evans 1901, 177–78.
12 Morris and Peatfield 2004, 43.
14 Walberg 1986.
had a narrative purpose, but simply pertained to matters of style and convention.\textsuperscript{15} Indeed, in discussing the depiction of human figures, Groenewegen-Frankfort noted that the curves of the Minoan body convey a strong illusion of lightness and fluidity which can lead the onlooker to perceiving movement in the images.\textsuperscript{16}

These observations on the stylistic nature of movement consequently allow for new views to be generated on the glyptic depictions studied by Evans, Persson and Nilsson. In consideration of the above, it appears that some rather large assumptions were made about the nature of dance and the criteria employed to identify it during the early twentieth century. A brief exploration of four main questionable suppositions and some alternatives to the original interpretations on dance are presented below.

**Some Early Twentieth-Century Assumptions on Dance in Aegean Bronze Age Iconography**

Most remarkable is the assumption that movement possessed a narrative value. Evans, Persson and Nilsson perceived movement as a means for demonstrating that the figures were engaged in a specific and identifiable activity. When depicted in conjunction with the human body in two-dimensional imagery, movement was therefore associated with action by these authors. As a result, the figures have often been described as “protagonists”,\textsuperscript{17} implying that they are engaged in a process leading to a recognisable end.

As was noted above, however, movement may be a stylistic or a compositional element rather than a narrative one. Moreover, it is also conceivable that movement was only an auxiliary feature to the scenes, applied to the body for aesthetic reasons. The figures’ bodies may not have been the main focus of the scenes despite their central position; it may have been their depiction alongside other features such as paved courtyards, buildings, trees, bateyls and hovering objects which allowed the scenes to communicate their contents. The human figure and human actions alone might not have held as much direct significance as we assume it did today.

The second assumption transpiring from the aforementioned studies is that movement equated with dance. It is conspicuous that the authors did not advance any clear discussion on why movement could not belong to another type of activity. Certainly, the images convey an impression of unity and balance; the figures in the Isopata, Dendra-Midea and Hagia Triada Rings parallel each other’s gestures and bodily postures. Harmony, however, can also exist in other performances. It is not more fanciful to suggest that the women in the Dendra-Midea Ring, Hagia Triada Ring and the Hagia Triada seal impression, for example, were involved in a procession, as might also have been the case for the women in the “Sacred Grove and Dance” fresco.\textsuperscript{18} It is also plausible that the women in the Vapheio Ring were reciting or chanting.

Moreover, it is worth mentioning that the identification of dance specifically, rather than performance in general, demonstrates an assumption that dance and other performative acts were considered as altogether different activities during the Aegean Bronze Age. It is possible that our present distinctions did not exist. In her analysis of
Minoan performance, German noted that “if dance and procession are so similar visually, perhaps, to the Minoans and Mycenaens, there was no difference”.\textsuperscript{19} Younger, in fact, previously chose to also consider these two activities as one and the same in his analysis of Aegean seals.\textsuperscript{20}

The fourth assumption relates to gestures. The gestures performed by the figures were interpreted as being part of a sequence of gestures rather than consisting of individual poses. It is, however, possible that the figures were intended to be seen as still. They may have been held in check as part of the scene’s subject. If these glyptic depictions served to represent Aegean Bronze Age experience, it is possible that certain activities required one to stand still in a specific position for a select amount of time. One such situation would be at the beginning of a performance when – before the music or recital begins – the figures place themselves in a preparatory position in the space designated for performance. Or, equally, stillness may be required in respect or honour of a non-depicted individual or of a descending figure, as can be seen in the Isopata Ring.

Furthermore, in taking a closer look at the gestures of the two figures depicted on the right side of the Isopata Ring, it appears that it is reminiscent of the rightmost figure in the “Toreador Fresco” from Knossos (fig. 3). Evans described the figure as “stretch[ing] out both her hands as if about to catch the flying figure”.\textsuperscript{21} Upon closer observation, the figure does not appear to be moving, nor does his/her stance directly imply movement, instead he/she stands in a preparatory posture with a view to moving to catch the leaper if needs be. It is worth mentioning that the figure was reconstructed by Gilliéron with pointed feet as if he/she was jumping, yet it is possible that his/her feet were depicted as flat on a presently unpreserved ground-line. Incidentally, this figure is lower on the fresco’s surface than the figure to the left of the scene who appears directly engaged with the bull. Additionally, as Morris and Peatfield also noted,\textsuperscript{22} unlike the figure in the “Bull Leaper” fresco, this character’s hair is not depicted as flying, thus reducing the likeness of him/her being depicted as animated.

A cause for the occurrence of such uncertainties on the existence of dance in Aegean Bronze Age depictions most likely relates to a shortage of consideration on the essence of this type of performance. While dance has been strongly connected to Minoan culture in the popular, artistic and academic spheres,\textsuperscript{23} and despite its association with other archaeological remains such as the Theatral Area and the dancing platforms in Knossos,\textsuperscript{24} the courtyards of tholos tombs,\textsuperscript{25} and the clay models from Kamilari and Palaikastro,\textsuperscript{26} for example, little discussion on the dynamics of representing dance in two-dimensions and in still form exists. It is therefore time to consider the subject more closely, and to ask some new questions about this type of performance, most especially about its relationship to the studied scenes. Particularly pressing is the need for an investigation into how dance can be identified in Aegean Bronze Age iconography, and if it can indeed be distinguished from other types of activities. Thus, in the following section, some preliminary explorations of these issues are exposed.

\textsuperscript{19} German 2005, 55.
\textsuperscript{20} Younger 1988, 53–4.
\textsuperscript{21} Evans 1901, 212 (my italics).
\textsuperscript{22} Morris and Peatfield 2004, 43.
\textsuperscript{23} See Momigliano (2013) regarding Knossos and Minoan iconography as a source of inspiration for choreographies.
\textsuperscript{25} Branigan 1993, 130–31.
\textsuperscript{26} See Levi 1962; Evans 1930, 72.
New Questions on Still Two-Dimensional Representations of Dance

The first question to be explored in this section consists of whether a frozen image can effectively render dance and movement. As a still medium, the image inevitably stalls the fleeting temporality inherent to the dance movement and consequently artificially isolates it from the rest of its process. Art historians have argued that life in movement “is too rich and manifold to allow imitation without some selective principle”,” and thus the transformation of a three-dimensional entity into a still-dimensional form involves a process of deconstruction. Representing movement in its entirety in still imagery is paradoxical and impossible.

It is nevertheless conspicuous that, despite the process of deconstruction that dance and movement undergo in their transformation into a still two-dimensional form, an image can convey an impression of their presence. Some insight into how this might happen can here be gained from studies on dance in still-photography. It has been argued that an impression of movement can be created through the presence of indexical information in an image. Indeed, the dance movements captured by the camera, which in real life are ephemeral and almost impossible to see owing to their fluidity, are not accurate representations, but simple indicators to the existence of a larger sequence of movements. The static image can therefore be read as an index for the dance, as a reference to a whole, as a mere fragment, but not as a representation.

In the light of this theory, it may therefore be more accurate to argue that the Aegean Bronze Age glyptic scenes discussed by Evans, Persson and Nilsson make reference to movement and dance rather than represent it (if movement is not uniquely a stylistic feature). Consequently, these scenes ought not to be perceived as documentations of real choreographies nor as stills of “a motion film suddenly brought to a halt”. It is not unreasonable to suggest that figures in glyptic depictions are frequently mistaken as representing a process when they are, in truth, only making reference to it. Thus, to answer the question asked above, an image cannot represent movement and dance, but can successfully make reference to it.

The second question to be asked here is whether dance can be differentiated from other types of actions. How do we recognise dance? The views of two dance theorists are here consulted to explore this issue. The first, advanced by Francis, posits that purpose of movement is what allows us to differentiate dance from other types of activities. In a cognitive study on cross-cultural perceptions of dance, Francis noted that candidates, subjected to film-clips representing ballet, fire-fighting, wrestling and ice-skating amongst others, identified ballet as dance for its minimal competitive and socially and economically contributing nature, which were features displayed by the other activities. Candidates did not regard the movements represented by ballet as serving a strictly professional and necessary purpose like those performed during fire-fighting, for example.

The second theory of relevance here relates to the importance of contextual information for identifying dance. It has been argued that context is what helps us understand whether an activity is dance or not. Depending on the context in which a movement is produced, it is possible to understand its significance, especially in the case of a movement belonging to a dance repertoire while also being a common gesture.

In the light of these theories, dance can therefore be differentiated from other activities by analysing the purpose of the movements and the contexts in which they were produced. Although Francis and McFee’s studies concern dance itself and not images, their theories can nevertheless also be applied to still two-dimensional scenes. However, are these theories enlightening for a study on Aegean Bronze Age glyptic iconography? And more importantly, can theoretical research on dance provide us with any conclusive information on the presence of dance in the studied scenes? The answers to these questions are unfortunately negative. The purpose of movement and contextual elements are too highly debated issues in Minoan iconography to serve as founding criteria for the identification of dance. Too little is securely known about the significance of courtyards, trees and shrines in Aegean Bronze Age glyptic to encourage contextual analyses. The utility of this method has in fact been previously discussed; such approaches allow too much “room for erroneous identification of images of dance” despite

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28 Reason 2003, 49.
29 Furumark 1965.
30 Francis 1996, 52.
31 McFee 1992.
the salience of their context. \(^{32}\) Similarly, in an analysis of the archaeology of dance, Lopez y Royo argued that too much attention to costume and ornament can mean that dance is “deal[t] with in a cursory manner, in order to concentrate on context”. \(^{33}\)

**Can We Confidently Identify Dance in Aegean Bronze Age Iconography?**

In the light of the above statement, it may therefore be asked how dance, movement and the studied scenes are to be approached if not through the means outlined above. Unfortunately, no simple answer nor method of analysis can be so readily offered. Closer examinations of the orientation of the figures’ bodies, alongside comparisons with their rendering in other depictions and media, might allow for some further enlightenment on the communicative, indexical and iconic nature of the Aegean Bronze Age two-dimensional body. Moreover, the creation of gesture typologies in association with observations on the angles at which the bodies are rendered might considerably alter and deepen views on the nature of glyptic scenes.

Having argued that it is not presently possible to confirm or disprove the presence of movement and dance in the nine glyptic scenes, it must nevertheless be noted that some more convincing Aegean Bronze Age depictions of movement and action do nevertheless exist. In glyptic, the small floating figures – interpreted as epiphanies – can be recognised as moving, or more precisely descending from the sky – by reason of their pointed feet and their floating hair. \(^{34}\) For example, the female figure in the Isopata Ring demonstrates downwards movement as a result of the approximately 35° angle of her feet compared to the 90° angle of the larger figures’ feet, and due to the horizontal depiction of her hair, in contrast to the larger figures’ dangling locks. Similar conclusions may also be reached for figures in frescoes such as the “Bull Leaper” fragment from the Knossos School Room whose “pointed” feet are not in contact with the floor-line, and the “Dancing Lady” from the Queen’s Megaron whose horizontally rendered hair indicates that she is moving (fig. 4).

To conclude, this brief commentary has demonstrated that dance is a much more complex topic to study in Aegean Bronze Age two-dimensional iconography than was previously supposed. While, time and again, dance has been associated with Minoan culture, little is known about it, especially since Evans’, Persson’s and Nilsson’s attribution of movement can be questioned. It can nevertheless be observed that, be movement a stylistic or a narrative feature, the figures studied above undeniably present a “readiness” for movement. They do convey the impression that they are about to move. The kinetic energy encapsulated in the fluidity of the bodies and the apparent continuity between the latter and their surroundings is powerfully compelling. Such is the richness of these scenes.

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\(^{32}\) German 2005, 55–6.
\(^{33}\) Lopez y Royo 2007, n. p.
\(^{34}\) See Kyriakidis 2005, 146.
Bibliography


A Portable Goddess

On Performative and Experiental Aspects of Figures and Figurines

Katarzyna Zeman-Wisniewska

Coroplastic studies – concerning figures and figurines, constitute a distinct, very vibrant and dynamic field of archaeological research. A traditional perception of figures and figurines was usually as objects of art, the main purpose of which was to be looked at. However, as ethnographic examples illustrate, anthropomorphic statuettes are made to be used in a variety of ways and interacted with: thus touched, handled, and carried about. In this paper, I discuss performative and experiential aspects of so-called “Goddesses with Upraised Arms”, terracotta figures and figurines, representing a standing female with a long skirt and arms stretched upwards, dated to the Late Minoan IIIC. As comparative material, I use examples of morphologically similar figurines known from Cyprus, from the Late Cypriot III until the Classical period. Considering their find spots and dimensions I discuss how they might have been handled and displayed and how that would affect the way people who interacted with them perceived them. Although morphologically similar Cretan and Cypriot examples vary clearly in size and, as I argue, also in function. All studied examples are three-dimensional objects, with a certain degree of portability. Bigger or smaller size imposes specific limitations and possibilities, i.e. a figure is more visible for a larger group of people, and a figurine is more palpable and easier to handle. Moreover, the dimensions of the object play an important role in the process of perception and can have psychological effects on viewers and/or handlers. An example of a performative aspect of Cretan figures, which I discuss thoroughly in this paper, is their possible usage in processions, or as a representation of a ritual, assuring its continuous repetition.

Introduction

Terracotta figures and figurines, especially anthropomorphic ones, have always attracted the attention of scholars. Anthropomorphic statuettes, in particular, are fascinating in the way they bring us face to face with the past, and have provoked numerous discussions concerning ancient religions, social structures and even prehistoric perceptions of beauty. Coroplastic studies – concerning figures and figurines – have recently developed as a distinct, very vibrant and dynamic field of archaeological research. Previous art historical approaches have been supplemented and further challenged by new methodologies based on contextuality, also benefitting from ethnographic research and gender studies. Archaeologists have started to acknowledge that artifacts, including figures and figurines, should not be studied as they are presented in modern museums, standing alone, extracted from their environment, visible only en-face and untouchable. These objects need to be placed within their social and spatial context, because they derive their meaning from them, and not vice versa as it used to be believed. These new methodologies invite us also to explore further possibilities of “figuring out figurines”, as three-dimensional, palpable objects, and the role they might have played in the life of past communities.

In this paper, I would like to consider performative and experiential aspects of terracottas, how they might be handled and displayed in a variety of ways, i.e. touched, or carried about; and how that would more specifically have affected the way they were perceived by people who interacted with them. Methodologically, I follow Elizabeth French, who in her study of Mycenaean terracottas made an important distinction between figurines, small, handmade, and figures, with coil or wheel-made stems/bodies and of a large size. Bigger or smaller size imposes specific limitations and possibilities. The dimensions of the object also play an important role in the

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1 This paper was a part of my PhD project at Trinity College Dublin, which was funded by the Irish Research Council for the Humanities and Social Sciences. I would like to thank Dr Christine Morris, Dr Laerke Recht and the anonymous reviewer for their suggestions and comments. 
2 Ucko 1968. 
5 French 1981.
A Portable Goddess

process of perception and can have psychological effects on viewers and/or handlers.\(^6\) I will discuss these issues using a case study of groups of Cretan and Cypriot figures and figurines conventionally termed “Goddesses with Upraised Arms”.

“Goddesses with Upraised Arms” are anthropomorphic terracottas representing a standing female with a long skirt (often wheel-made) and arms stretched upwards, sometimes wearing a tiara.\(^7\) This type of statuette had emerged in Crete\(^8\) and was especially common in Postpalatial shrines; they are considered to be a primary phenomenon of this period’s cult activity.\(^9\) Cretan sites where they have been reported include: Hagia Triada, Gazi, Gournia, Kh alasmenos, Kannia, Karphi, Kavousi Vronda (fig. 1) and Knossos.\(^10\) Figures or their fragments found at these sites can be dated to Late Minoan IIIb or Late Minoan IIIc. Figurines often classified as “Goddesses with Upraised Arms” are also well attested in Cyprus from Late Cypriot III down to the Classical period and were especially common during Cypro-Geometric I–II.\(^11\) The earliest Cypriot “Goddesses with Upraised Arms” were found in Kition and Limassol-Komissariato and are dated to Late Cypriot IIIc. Examples from the Cypro-Geometric period have been reported from Hagios Iakovos, Lapithos, Kition, Enkomi (fig. 2), Idalion, Palaeapaphos-Skales, Ormidhyia, Hagia Irini, Morphou-Toumba tou Skourou, and Kition.\(^12\) There are also several examples dated to this period but of unknown provenance.\(^13\) The “Goddesses with Upraised Arms” group consists of many very different figurines and figures – they vary in size, decoration, associated attributes, and the quantity of them found at individual sites. The first examples of “Goddesses with Upraised Arms” on Crete were figurines and figures of a moderate size, like the terracotta from the Unexplored Mansion in Knossos, which was 0.33 m in height,\(^14\) or the “Goddess with Upraised Arms” from Gournia of 0.365 m.\(^15\) Their dimensions link them with the earlier Minoan coroplastic traditions, in which even highly decorated representations, probably of special importance, were rather small. In the later LM IIic shrines of Karphi and Kh alasmenos, figures were larger, ranging from 0.5 m to 0.8 m in height. In comparison, Cypriot figurines with upraised arms from Enkomi were very small, usually no bigger than 0.07 m in height. Other examples from Cyprus are figurines of rather medium size, 0.12 m to 0.2 m; of such dimensions are the “Goddess with Upraised Arms” found in Limassol-Komissariato and in Kition.\(^16\) The dimensions of an object play an important role in the process of its perception and can have psychological effects on viewers and handlers.

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\(^{6}\) Bailey 2005, 26–44.

\(^{7}\) Alexiou 1958; Karageorghis 1978.

\(^{8}\) Gessel 2004, 131.

\(^{9}\) Peatfield 1994.

\(^{10}\) Gessel 1985.

\(^{11}\) Karageorghis 1978.


\(^{13}\) Karageorghis 1993, 85.

\(^{14}\) Higgins 1984, 198.

\(^{15}\) Eliopoulos 2004, 86.

\(^{16}\) Karageorghis 1978, 16–7, 28–9.
Size imposes specific limitations and possibilities; a large figure is, for example, more visible for a group of people, and a figurine is more palpable and easier to handle. Nevertheless, scholars interpreting assemblages from both islands usually try to assign one brief definition to them – Goddess or Priestess.\(^{17}\)

**“Goddesses with Upraised Arms” in Crete**

In Postpalatial Cretan towns and settlements, we find small so-called bench-sanctuaries, approachable directly from the street, with the “Goddesses with Upraised Arms” figures and associated ritual equipment: snake tubes with kalathoi, plaques, along with domestic pottery.\(^{18}\) There are almost no luxury objects associated with these shrines, and the figures themselves were of coarse clay probably made by local potters.\(^{19}\) Moreover “Goddesses with Upraised Arms” were made to be able to stand without any support, on the stable base of their bell-shaped skirts. The figures were designed to be the focal point of the ritual, main cult statuettes, a proposition reinforced by their position on the benches opposite the doorway in the shrine. Bench sanctuaries, being accessible directly from the street, most probably served all members of the community.\(^{20}\) Thus we might suggest that cult itself was public and everyone could participate in it. However, the size of these sanctuaries, which usually consists of up to three small rooms, did not allow for the performance of a public ritual.\(^{21}\)

In Bronze Age Aegean art, a ritual of a procession, which is an organized body of people advancing in a formal or ceremonial manner, is attested. It was and still is in many societies a popular form of public celebration, forming an orderly and impressive ceremony, as well as a kind of cult activity which might involve a vast majority or even a whole community.

There are two iconographical examples from the Aegean, which could be interpreted as illustrations of a person holding a figurine; both come from Mainland Greece. The first is a fragment from a fresco from Tiryns, which depicts a clutched hand, with the fingers wrapped around an object that might be the lower part of a stylized Mycenaean figurine or a smaller figure\(^{22}\) probably c. 0.3 m high (estimated based on proportions). It is part of a larger depiction of a procession of life-sized women carrying different objects, such as a pyxis or jewelry, probably as offerings.\(^{23}\) However, the image is too fragmentary to establish for certain whether it is a depiction of a terracotta figurine or a vessel. The other example is also a fresco fragment, from the Southwest Building in Mycenae, which depicts a pair of hands (possibly female) holding a miniature female dressed in a long, yellow garment decorated with red dots and borders.\(^{24}\) It is part of a processional fresco, which culminates in a depiction of “Mykenaia” and a seated goddess, thus probably illustrating a public offering for the deity and/or involving priestesses. It has been proposed that the miniature person is a child being offered to the deity,\(^{25}\) although she seems to be wearing a helmet, which, in other examples from Mycenaean iconography, is considered to be an attribute of a divinity.\(^{26}\) It is, however, possible that the miniature female is a terracotta figurine or figure, or rather what Mycenaeans thought such a figurine represented. If they were figures of gods or goddesses, society probably would have perceived them as being inhabited by a deity during rituals, or possibly even permanently. Therefore, it is tempting to postulate that this fresco, rather than being a depiction of a depiction, illustrates the actual meaning of the figurine. Whittaker compares this to later Greek vase painting, where it is hard to distinguish between the deity and his or her statue.\(^{27}\) As Immerwahr observed, it is difficult to establish whether both hands touching the miniature female belong to the same person, or if this fresco fragment illustrates an actual act of offering and passing of the gift between the

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\(^{17}\) It has been also suggested that the function of figurines representing worshippers found in sanctuaries might have been to give a concrete, permanent form to a prayer and ensure its continuous repetition (Connelly 1989; Whittaker 2009). Whittaker (2009, 102–3) presents examples of such terracottas ranging from Tell Asmar in Mesopotamia to Cypriot Hagia Irini and the Temple at Hagia Irini on Kea. She argues that a dedication of a figurine or a figure might have symbolized a dedication of a prayer, or a ritual that was repeated continuously by being embodied within the offering. A similar proposition had already been made by Evans; he suggested that terracottas in the Double Axe shrine in Knossos were arranged in a specific way, illustrating a ritual for a Dove Goddess (Evans 1928, 335–44).


\(^{19}\) Gessel 1997.


\(^{21}\) Gesell 1985, 47; Rethemiotakis 2001.

\(^{22}\) Immerwahr 1990, 114.

\(^{23}\) Whittaker 2009, 107.

\(^{24}\) Immerwahr 1990, 119.

\(^{25}\) Immerwahr 1990, 119.

\(^{26}\) Kontorli-Papadopoulou 1996, fig. 95.

\(^{27}\) Whittaker 2009, 106–7.
A Portable Goddess

If it is indeed a terracotta figurine that is represented, it should be possible to observe that it was held with a thumb inside (as would be possible for hollow cylindrical terracottas). Thus, this fragment might illustrate a ritual during which the people in a procession bring offerings to the goddess, of which the first, and so probably the most important, is a figurine or a figure depicting a deity or – maybe in a symbolic manner – a child, e.g. for securing the divine protection of the first-born/heir. Mycenaean written sources also provide evidence for the use of figurines; it is probable that the Linear B word “te-po-ri-ja” is connected with the carrying of figures and/or figurines of deities in processions. Unfortunately, there is no such iconographical or textual evidence from Crete or Cyprus in the LBA or EIA, but Mycenaean culture provides a good analogy because of its close relations with both islands.

It is tempting to postulate the existence of this type of ritual in Postpalatial Cretan settlements as well, during which figures of “Goddesses with Upraised Arms” were paraded around the village. Although big enough to be seen from a distance, the figures were hollow inside which made them lighter and easier to transport. They could be held by the bell-shaped skirt or by the waist, in a way that would make the emblematic gesture of upraised arms visible to the observers. However, ethnographic observations suggest usage of a platform carried by two or four, usually specifically selected, people. Such observations might help us to move towards a model of how such rituals work at a practical level. A useful analogy is offered by an example of a procession with two figures of the Virgin Mary around Brok, a small town in eastern Poland. The figures used to be carried by young unmarried women from “good” and usually wealthy families. Involvement in this ritual was meant to give them “special blessing”. By underlining their social position it also gave them better chances of a good marriage. Nowadays, girls are usually no longer interested in taking active part in the procession, and they are replaced by elderly, married women from one of the religious organizations (figs. 3 and 4). The figures themselves stand in the church, but their importance is considered to derive from their usage in processions during which they bless the village and the whole community. Of course, we

Fig. 3  Procession with a Virgin Mary figure in Brok, Poland (photographed by the author).

Fig. 4  Procession with a Virgin Mary figure in Brok, Poland (photographed by the author).

28 Immerwahr 1990, 119.
30 Author’s own ethnographic research.
should be very cautious when applying ethnographic analogies: not to treat them as a ready-made answer to our research questions, but rather as making us “aware of modes of behavior that would be difficult to deduce by logic alone”.31

Another analogy is offered by texts concerning processions from Emar in Syria, a Late Bronze Age site at the fringe of the Hittite empire.32 They underline especially three elements: leaving the sacred site, carrying the sacred object (the most important sacred objects were the gods themselves in form of statues) and returning to the sacred site; sometimes it also included passing by a special place or e.g. between stones.33 We can see that processions involved special clothing, e.g. the priestess dressed as a bride, and music. There is always a set order in which participants move, such as during the zukru festival, when first come animals, singers are before the offering, after the offering is the god Halma and behind him the divine axe.34 Also the precise timing is very important, when the procession takes place and when the particular elements (like veiling and unveiling of the statue) happen. Not only do the priests and priestess or musicians take part in it, the whole population of the city watches and follows them.35

“Goddesses with Upraised Arms” in Cyprus

Cypriot “Goddesses with Upraised Arms” from the Late Cypriot IIIIC and Cypro-Geometric periods were also predominantly found in ritual contexts – in sanctuaries. Does this mean that Cypriot “Goddesses with Upraised Arms” figurines could be interpreted in a similar way to the Cretan examples? More than 100 fragmentary examples of such figurines were found in the western area of the Ingot God sanctuary in Enkomi. The small size (around 9 cm) and the large quantity of the Enkomi figurines do not permit us to identify them as representations of deities, and there were also male statuettes of similar size found within this area.36 Both types could originally have been attached to circular plaques and arranged into groups of one male musician and three female dancers, judging from the presence of fragments of bases and music instruments and from complete examples of later date.37 However, because of the context within which they have been found, it should be seen as a part of the ritual. This would indicate the presence of performances including music and dance in Early Iron Age Cypriot religion, which are represented by the gesture of upraised arms. The primary function of the figurines from Enkomi was to depict active participants of the cult, and the performance of the ritual itself, or they might even have symbolized a dedication of a prayer, or a ritual that was repeated continuously by being embodied within the offering. On the other hand, figures from Crete were first of all objects used in the cult, as an indication of the divine presence. Despite the stylistic similarities and even despite being found in a similar context (i.e. in a sanctuary), the basic meaning of these artifacts was different for their users.

Another characteristic sub-type of Cypriot “Goddesses with Upraised Arms” is a free standing figurine of 12 cm in height with a pillar-like base.38 The smaller size and absence of a bell-shaped skirt are the most visible elements. They might be considered votive offerings brought to sanctuaries, as a personal offering. Moreover the cylindrical body of the figurine could easily be held in one’s hand with the fingers wrapped around the pillar-like lower part, while the arms and head would have been visible, presenting the emblematic gesture of upraised arms. Miniaturization, always connected with a certain degree of abstraction and compression, results in the intimacy that is demanded by small objects.39 It also empowers the spectator, by facilitating physical control over a thing, and encourages a notion of possession.40 Thus an intimate relationship might be created between figurine and holder, indicating that the cult of which these statuettes were part of was on a personal level.

31 Talalay 1993, 40.
38 Smith 2009, 126–34.
39 Bailey 2005, 26–44.
Conclusions

The case studies presented here underline important methodological issues concerning the study of the artifact type designated with the overarching term “Goddesses with Upraised Arms”. Figures and figurines which are morphologically similar may, nevertheless, have different meanings. The same gesture can be described as active (as an element of the performance) and passive (as an emblematic gesture, symbolic) within different contexts. The meaning and function of this type of figure in Crete also should not simply be transferred to the Cypriot material, even if the general ritual context of their usage is superficially similar. “Goddesses with Upraised Arms”, despite their conventional name, could have depicted deities, priestesses or dancing votaries, have taken the role of both the object or focus of the ritual and a representation of the ritual itself, and have been part of communal or personal levels of cult. Thus, rather than assigning a single meaning to terracottas belonging to the “Goddesses with Upraised Arms” type, we should be aware of a whole range of possibilities for their individual meanings and functions.

I postulate that figurines and figures are not meaningful on their own, but that they gain their special meaning through being actively used in ritual, whether it is a communal procession or an intimate act of an offering. Their function and meaning are inevitably connected in a way so as to possibly determine each other. However, we should also remember that they might have multiple functions and meanings which could have changed through the course of time and according to context. As I have illustrated, based on find context and characteristics of the objects themselves, such as dimensions and shape, it is possible to reconstruct probable ways in which they would have been handled. This active approach to studied material should make it more approachable and understandable, and eventually brings us closer “face to face” with past communities.
Bibliography


“Minoan” Material Entanglements

Documenting and Interpreting “Minoan” (?) Craftsmanship
Minoan Pottery: From Materials to Materiality*

Since the early 20th century, Minoan pottery has often been treated as art. Open to criticism for its subjectivity and indistinct methodology, this perspective does hold one distinct advantage: it encourages a synoptic viewpoint by connecting pottery with other artistic categories, such as wall paintings, metal and stone vases, faience and ivory figurines, and seals. Curiously, the anthropological and archaeometric approaches to Minoan pottery that are seen in many quarters as superseding art historical perspectives have lost this important viewpoint. The archaeometric focus on the specific properties of ceramic technologies, and the anthropological concentration on the organization of production, exchange and consumption, have provided many new interpretations, but their weakness, rarely realized, is a narrow focus on pottery alone. However, there is, arguably, a move afoot to regain the synoptic advantages of art historical approaches, in the guise of an increasing concern with ancient “materialities”. This perspective examines the interconnections between different materials and their technologies, whether inorganic (metal, stone and ceramic, for example), or organic (e.g. bone, shell and basketry). One popular concept for exploring cross-craft links is skeuomorphism. New insights on how to think about these interrelations between media come from the interdisciplinary work on materiality, as well as the anthropology of art. The study of Minoan pottery has a great deal to contribute to and learn from these innovative perspectives. They mark a return, of sorts, to earlier 20th century work, though less essentialising, and more based in social practices and technological choices. This paper will review these various approaches to Minoan pottery and consider exciting new directions for the future.

Introduction

What I argue in this paper is that just as 30 or so years ago there was a shift in the study of Minoan pottery – with typological, chronological and art historical approaches supplemented by material and technological perspectives – so now we may be on the cusp of another shift. What is the nature of this transformation? It is hard to say, but I suggest that it can be characterized as a move from a concern with materials to a focus on materialities. To understand what this means we will need to look at some of the wider “materiality” literature appearing of late. But what it essentially entails is a heightened concern for interconnections and relations between people and things, and between things.1 Ironically, this could bring the study of Minoan pottery full circle back to the kinds of concerns that detained scholars of ancient Crete, particularly art historians, in the early 20th century. Of course there are significant differences and modifications, but the concern with the synoptic was a strength of these early approaches that has since been overlooked in the “materials” perspective. In the new “art history” that is beginning to emerge, the synoptic can and should be built from the bottom up, through the tracing of connections between materials, facilitated by a relational viewpoint that could certainly, but need not, utilize network methodologies.

111 Years Ago

Let us move now to a review of these early art historical perspectives, with an eye open in particular for their synoptic nature. What is notably interesting is the way that the history of Minoan pottery studies does not follow the trajectory that we imagine, as laid out in general surveys of pottery analysis. In a recent paper, Day and colleagues state that: “several authors have argued that the development of pottery studies can be organized into broad phases of a three-stage system: art historical, typological and contextual”.2 They suggest the same holds for Aegean/ Minoan ceramics. But when we turn to one of the surveys they cite, we find that what these authors actually have in mind for the initial “art historical” stage is the 18th and 19th century predilection for collecting antiquities.

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1 I thank the organizers for the invitation to the conference and for such a well-run and stimulating event. I am grateful to Donald Haggis for comments on a previous draft, and for permission to reproduce figure 3; to Wolf-Dietrich Niermeier for permission to reproduce figure 2; and to Andrew Shapland for providing very useful feedback on the early art historical approaches to Mycenaean and Minoan pottery.
2 Hodder 2011.
based on their aesthetic appeal.\(^3\) This may hold true for Classical and Etruscan pots, and Cypriot to some extent.\(^4\) But it is an argument that is rather more difficult to sustain for the Aegean/Minoan. If “Mycenaean” is included within this broader frame of reference, then indeed the 1886 work “Mykenische Vasen” is relevant.\(^5\) Soon after we find an art historical discussion of Marine Style pieces in New York and London,\(^6\) described as “Mycenaean” because at the time this was the catch-all for ancient Aegean pieces (and note still used in the early days by Evans and Mackenzie).

An interesting North American addition to this narrative, now that we have mentioned New York, is the doctoral dissertation of Edith Hall, *The Decorative Art of Crete in the Bronze Age*.\(^7\) The continental European influence is clear, citing the authors of “Mykenische Vasen”, Professors Furtwängler and Löschcke, in her opening lines; soon after she also makes reference to Riegl’s *Stilfragen*.\(^8\) However, though the dissertation is purportedly aimed at decorative art, Hall’s perspective seems rather to follow the chrono-typological approach of Evans and Mackenzie, and is almost entirely concerned with pottery. This may in part be explained by her direct involvement in Cretan fieldwork in 1904, at Gournia with Harriet Boyd Hawes.

This illustrates well the point that even though some Mycenaean pottery may have been subjected to art historical study in the late 19th century, *Minoan* pottery was not, because next to nothing of Bronze Age date had actually been recovered as yet from Crete. Curiously, the first identification of a uniquely Cretan pottery came through the discovery of distinctive polychrome vases at the Kamares cave in the early 1890s, which had come to the attention of Joseph Hazzidakis, who allowed a young English scholar, John Myres, to study and publish them.\(^9\) Myres quickly realized the exact correspondence with pottery found by Flinders Petrie at Kahun in Egypt.\(^10\) The connection between the two sets of material was in an indirect way facilitated by Hogarth, who was Myres’ tutor at Oxford. Hogarth was to have a further indirect impact on the course of events on Crete, as it was through him that Petrie was to influence Mackenzie in his commitment to a thorough typological and chronological treatment of Minoan pottery; it is Petrie, along with Pitt-Rivers, who is widely seen as critical to the emergence of the typological approach.\(^11\)

One should further note that Myres himself was very keen to excavate on Crete, and particularly at Knossos, following his work on the pottery from the Kamares cave.\(^12\) The course of events ended up favouring Evans who, no doubt duly influenced by Mackenzie (and perhaps Hogarth, who was also to excavate at Knossos), committed himself to an approach strongly directed towards typology and chronology. This is not to say that he did not

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\(^3\) Orton et al. 1993.
\(^4\) See early interventions of Cesnola and Ohnefalsch-Richter.
\(^5\) Furtwängler and Löschcke 1886.
\(^6\) Murray 1890.
\(^7\) Hall 1907.
\(^8\) Riegl 1893.
\(^9\) Myres 1893–1895.
\(^10\) Brown 1986, 41.
\(^12\) Brown 1986.
also have the synoptic eye of the art historian, always looking for connections between different arts and crafts. But what soon transpires is that Minoan pottery is to be treated from the get-go within a coherent typological and chrono-stratigraphical framework.

So, as Minoan pottery was primarily first known through excavation, its initial study is typological. This is not to say that an art historical approach would not have been applied if Minoan pottery had been recognized earlier, in the late 19th century. Certainly, the art historical approach does develop subsequently, albeit largely in the hands of those at some remove from the actual excavation process. Furthermore, it does have a strong continental flavour, no doubt picking up on the early work of Furtwängler, Löschcke, and Milchhöfer,13 then with substantial contributions from a number of influential scholars also based in Germany and the Netherlands.14 One of these, Friedrich Matz, was a particularly important figure in his role as founder of the Corpus der minoischen und mykenischen Siegel (CMS), and one might compare him in approach to two giants of art history, Riegl and Wölflin.15

This early art history of Minoan pottery is, however, probably most elegantly expressed in slightly later work, notably Groenewegen-Frankfort’s 1951 book Arrest and Movement.16 The author seeks to characterize Minoan art synthetically in terms of a sense of playfulness, talking of what she calls “Homo Ludens”. She attributes this idea to Rodenwaldt who, she says, “first confessed that Cretan civilization held for him the enchantment of a fairy world”.17 This approach does not appear to generate much subsequent work, however, at least not in ceramics, with the possible exception of the art historical studies of Walberg (a Swedish tradition, through Furumark), who draws connections between motifs on seals and in Kamares ware.18 One should not forget of course in Britain, both Lacy (see fig. 1), and Higgins, from a curatorial perspective19; and in France, Gustave Glotz, and Pierre Demargne.20

An Anglo-Saxon tradition that continues parallel with this is somewhat more chronological and typological in orientation, and more tightly connected with excavated bodies of material, continuing in that tradition of Evans, Mackenzie, and indeed Pendlebury. We might cite here the work of various scholars working in the British School tradition at Knossos,21 though other foreign schools also play their part, such as the Italian School at Phaistos,22 the American School (e.g. at Kommos),23 and the Swedish and Danish Schools.24 These contributions are more archaeological than art historical, and hence with a reduced tendency to look synoptically across crafts.25

A Paradigm Shift: Minoan Pots as Socio-Economic Products

In the 1970s and 1980s we see an interesting “paradigm shift”, if that is not too strong a term. On the face of it, what this consists of is a turn towards scientific analysis. Admittedly, this had begun a lot earlier, with the work of Catling and collaborators in the 1960s.26 But what we witness now is a more concerted approach, with a single ware given concerted treatment from a number of angles. The studies by Betancourt of Vasilike ware in 1979 and East Cretan White-on-Dark ware in 1984 probably best epitomize this.27 They are “contextual” studies in that the contexts from which these kinds of pottery derive are carefully considered. However, in some ways they retain much of the preceding art historical/typological approach.28 What they do not really do is explicitly view pottery production and exchange as activities that are economically and socially embedded.29 The key work in specialized ceramic studies that does bring together materials analysis with a contextualized economic approach is Peacock’s study of Roman pottery wares.30 Evidently, this is not in Minoan pottery, but at Southampton Peacock did collabo-
rate with Renfrew and Williams in the late 1970s to develop a ceramic analysis project for the site of Phylakopi on Melos. Again, not Minoan, but getting warmer! Other connections need tracing here, such as the influence of Sander van der Leeuw’s 1976 thesis on Peacock, as also the work of Hélène Balfet. Still, this outlook did find its way into Minoan studies, through the work of Peter Day, who perhaps not coincidentally was an undergraduate at Southampton while Peacock was there; later in his graduate study at Cambridge, Day was also supervised by van der Leeuw, co-editor of the important volume *The Many Dimensions of Pottery*. Partly through this dual influence, then, Day’s work is characterised by a combination of materials analysis (petrography), socio-economic embeddedness, and ethnoarchaeology.

It is also interesting how this move towards viewing pottery production and exchange as socio-economic activity can be linked to wider currents in processual archaeology in the late 1970s and early 80s.

This processual concern, however, is understandably absent from the more art historical, single ware studies of Betancourt, and indeed from specialized ware and type studies that followed, also largely art historical and typological, rather than contextual, in character: Foster’s work on barbotine, Niemeier’s on Palace Style (fig. 2), Müller’s study of Marine Style, Georgiou on industrial wares, Gillis on conical cups, and Koehl on rhyta.

So, returning to Day, we can see an approach that pays close attention to material properties (using archaeometry) but with the integration of a socio-economic dimension that is informed by ethnoarchaeology. This approach is developed particularly in a series of studies on Early Minoan pottery at Knossos, but also with collaborators at other sites such as Fournou Korifi, and Kommos. The current author’s work at the time could probably be placed in this same category – both materially-oriented and using archaeological science, but also with an ethnoarchaeological bent, trying to access aspects of past social and economic organization.

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32 van der Leeuw and Pritchard 1984.  
34 Betancourt 1979; 1984.  
approaches do not necessarily have an archaeometric component, as in van de Moortel’s study of production organization in the Mesara, Christakis’ study of pithoi and storage, and Todaro’s work on pottery production in the EM Mesara.39

We have largely been discussing production and exchange thus far. But an interesting focus on pottery consumption has also emerged recently, again loosely anthropological, though perhaps more socio-political than socio-economic in emphasis, and grouped under the umbrella of “feasting”. Though Day’s work on production continues, we can see a partial shift of emphasis towards consumption too.40 This is also seen in the work of pottery specialists such as Borgna, Girella, and Langohr,41 and more generally the influential work of Hamilakis.42 There is an interesting question to raise here concerning the degree to which work on “feasting” has really been addressed towards questions of materiality. Do we really much discussion of the materiality of feasting? Here is one example of some commentary on the materiality of conical cups:

“Its plain character in a period which is seen as the highest artistic point in Bronze Age Crete, speaks of the political desire to evoke communal spirit and corporatism, masking thus existing hierarchies. It is worth comparing this shape with the main drinking shape of the subsequent periods, the kylix. While there are undoubtedly many contexts with masses of plain kylikes (most notably at Pylos), a phenomenon in some ways similar to the ‘neopalatial’ conical cup assemblages, the kylix allows for more formal diversity, and in its relative elaboration (in comparison to the conical cup), it makes a prominent rhetorical material statement: while the conical cup disappears as you hold it on your palm, the kylix is made to be raised, to be seen, and to be prominently present in the performances of communal drinking.”43

This discussion of the materiality of the conical cup from a consumption perspective is interesting for a number of reasons. It relies on a common sense assessment of the affordances of a conical cup – its small size and lack of handle would seem to suggest a graspability in the palm of the hand. Indeed, this can be contrasted with the kylix which is both stemmed and handled and affording quite different action repertoires. But conical cups continue in use at many Minoan sites even after the Neopalatial period – it is not as if they are replaced by kylikes, so the comparison is strained. And why not compare the conical cup with other contemporary drinking vessels, such as hemispherical or straight-sided cups? Perhaps we might develop experimental methods for comparing the affordances of different vessels, rather than speculating as to the conspicuousness of conical cups, or the extent to which they might have afforded “raising”? We ought also to consider the materiality of sets of drinking and pouring vessels, and how different artefacts work together in assemblages.44 This is not to point out deficiencies in Hamilakis’ conception of materiality, as it is actually a much broader problem; the point really is to highlight that Hamilakis is much more concerned with other related processes, namely corporeality and temporality:

“Thinking thus about feasting from the point of view of punctuated temporality, repetition, memory, sociality, and above all the human body and its senses, it makes no sense to rigidly separate it from other drinking and eating episodes. Neither is devoid of social meaning, and neither is purely biological, they are both about in-corporation.”45

So we see here a different set of concerns. But materiality is of course linked to corporeality and temporality, though little has been done as yet to explore these connections and this would be an interesting direction for the future.46 An area where materiality studies could benefit from integration with corporeality, for example, is the emphasis on the multisensory, somatic nature of the human engagement with the material world.47 From such a perspective one might talk of a “synaesthetic” view across different Minoan crafts, rather than a synoptic one.48 And in the same vein, a rapprochement with current ideas on temporality and memory would encourage a stronger sense of the multiple temporal scales at which materiality unfolds.49

42 Hamilakis 2008.
44 Such as the Middle Minoan IB pottery from Deposit A in the Early West Magazines, Knossos – Macdonald and Knappett 2007.
45 Hamilakis 2008, 18.
46 This idea emerged through discussion with Yannis Hamilakis during the conference, and I am most grateful for his input.
48 I am grateful to Yannis Hamilakis for raising this interesting point in discussion.
49 See for example Olivier 2008.
Of course, it is not as if these new approaches to both pottery production and consumption have superseded the mass of “traditional” pottery work. The different approaches are compatible, as one can see by the involvement of exactly the same authors in typological studies too, such as Wilson in the *Knossos Pottery Handbook*, and my own work with Poursat at Malia and Macdonald at Knossos.\textsuperscript{50} There are also many scholars who excavate sites and thus have to be “generalists” who know something about everything, while also being pottery specialists to greater or lesser degrees.\textsuperscript{51} Then there are those archaeologists on survey projects who use surface pottery to characterize their sites in terms of date and function; because of the worn nature of much surface pottery, many typological features are absent, obliging fuller attention to fabrics. Thus research on survey pottery has tended to make fuller use of fabric analysis, including petrography. Pioneering work on Cretan ceramic fabrics has thus been done as part of survey projects, both in the east, in the Mirabello region, and the west, in the Sphakia survey.\textsuperscript{52} Important work has also been done off-island on Kythera and Antikythera, both strongly influenced by Crete in the Bronze Age.\textsuperscript{53} Moving further afield a little beyond the Minoan sphere, one can also point to the work of Kiriatzi and colleagues on Aegina and the Greek mainland,\textsuperscript{54} and Hilditch in the Cyclades.\textsuperscript{55} Thus, there is quite a constellation building up of different kinds of overlapping work, typological, compositional and technological.

### From Materials to Materialities

If these characterizations are not that neat and categorical we should not be too surprised. We should not forget the title of the book by Sander van der Leeuw, *The Many Dimensions of Pottery*. But however successful the “materials” approach has been, when driven at least by a desire to reconstruct socio-economic processes, it has its weaknesses too. Chief among them is, arguably, the loss of the synoptic viewpoint. This viewpoint, that draws connections between crafts and among things, was a strength of the art historical approach. Is there some way of recovering this while retaining a concern with the social?

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\textsuperscript{50} Poursat and Knappett 2005; Macdonald and Knappett 2007.

\textsuperscript{51} Scholars including Tom Brogan, Gerald Cadogan, Erik Hallager, Sinclair Hood, Vincenzo La Rosa, Lefteris Platon, Giorgios Rethemitakis, Giannis Sakellarakis, Jeff Soles, Metaxia Tsipopoulou, Maria Vlasaki, and Peter Warren.

\textsuperscript{52} E.g. Haggis and Mook 1993; Moody et al. 2003.

\textsuperscript{53} Kiriatzi 2003; Pentedeka et al. 2010.

\textsuperscript{54} Gauld and Kiriatzi 2011.

\textsuperscript{55} Hilditch 2009.
I think it is already happening. It is apparent in the recent work of Haggis on the MM IB pottery from the “Lakkos” at Petras in east Crete; he uses the notion of “symbolic transference” to explain some of the links that can be traced between media, such as pottery, figurines and seals (fig. 3). \(^{56}\) We might also note Hatzaki’s study of intercraft connections in the Neopalatial and later periods, seeking to account for connections between pottery motifs such as tortoiseshell ripple, and other materials such as stone and wood. \(^{57}\) There are also recent projects on cross-craft interaction that look for stylistic and technological synergies between crafts. \(^{58}\) Andrew Shapland’s research, though not specifically pottery-oriented, also does a very interesting job of using ideas from the anthropology of art to assess interconnections, especially in animal representations. \(^{59}\) Also very pertinent here is the recent Roundtable at Sheffield (February 2011), “Material Worlds of the Aegean”, where many papers sought connections between crafts, often using the concept of skeuomorphism. \(^{60}\)

I would call this a shift from materials towards “materialities”. It represents a desire to consider how things would have been perceived, experienced and valued. Within one popular conception of “materiality”, it is social relations that generate such perceptions and experiences: hence “materiality” is what we might call socially constructed. This has been sharply criticized by Ingold, who also adopts a relational perspective but one which basically turns the tables and says that materiality is materially constructed. \(^{61}\) We can open this out further and argue that materiality is also about interdependency – that we have to consider individual materials in terms of their position within wider ensembles or assemblages. This is exactly what Haggis and Hatzaki have both been doing, and I think this is a crucial aspect of how we might begin to use “materiality” in a useful way to distinguish this approach from what has gone before. By drawing connections between materials one can build up a picture of material and visual culture as a series of interconnected material metaphors. \(^{62}\) And in building from the bottom-up in this way, we can begin to return to a modified art history that has a synoptic view of what Minoan “art” – or material and visual culture – is like overall. A kind of “new art history” or, with a nod to the location of this conference in Heidelberg, “Bild-Anthropologie”. \(^{63}\)

But in the wider literature on materiality there is another more poetic, more material-centred approach that is about materiality as vitality. It tries to understand how materials resist us, and how they desire something of us. Such an approach is more tactile, experiential, and visceral. This is not a direction that I have seen as yet in Minoan archaeology, or at least not explicitly developed. The poetics of Minoan pottery: how it has its own vitality that we cannot entirely tame. How it would have worked on people in the past too. We have dependency on things as much as they have dependency on us. Or perhaps we have already seen this approach. Let us return to Groenewegen-Frankfort:

> “If we give ourselves up to the naïve enjoyment of what Cretan pictorial art has to offer: the passionate beauty of plants in bloom, of youths at their games, the delicate mysteries of subaqueous life, colour and movement – but movement even more than colour – seem to be the secret of our enchantment, and above all its naturalness, the beauty of its freedom.”

The key words here are, in this context, “if we give ourselves up”. The author is saying that the art itself has a vitality that is elusive if we do not try to attune ourselves. Of course, she is listening to only one kind of vitality, an organic vitality, connected with the figurative. There are many forms of vitality we might try to capture, not least the very strong sense of inorganic vitality in the Middle Minoan period, with its rampant skeuomorphism.

Finally, a comment on the call we frequently hear about the need to get to the people behind the artefacts. But ironically this can easily replicate a kind of separation of people and things as inhabiting different domains. If we recognize their mutual entanglement and dependencies, then we can tackle people-thing relations differently. And perhaps one way towards this is to try to grasp thing-thing relations more fully, as 111 years ago, and if not certainly 60 years ago.

\(^{56}\) Haggis 2007.  
\(^{57}\) Hatzaki 2013.  
\(^{58}\) Brysbaert 2011; van Dommelen and Knapp 2010.  
\(^{59}\) Shapland 2009; 2010a; 2010b.  
\(^{60}\) Tsoraki, Doonan and Sherratt (forthcoming).  
\(^{61}\) Ingold 2007.  
\(^{62}\) See Gamble 2007.  
\(^{64}\) Groenewegen-Frankfort 1951, 185–86.  
\(^{65}\) Hodder 2011.
Bibliography


Ethno-archaeological comparisons and experimental archaeology have long formed part of various fields of archaeological research throughout the Aegean and beyond. The present paper seeks to employ these methods to investigate ceramic technology and the social status of the potters in Neopalatial Crete. Fifty years after the groundbreaking studies of Hampe and Winter on potters and tile-makers in Greece and Italy, a comparison between pottery production in the Minoan workshop at Zominthos and a traditional potter from the village of Margarithes may offer interesting clues on methods of production and the way things may or may not have changed over time. Opportunities to observe the work of traditional craftsmen are certainly going to decrease further throughout the 21st century which makes documenting and preserving this source of information even more significant. This also bridges the gap to the second topic of the paper: the craftsmen behind the product.

Little is known about Minoan craftspeople and their social status. Thanks to some of the written Linear B sources we are rather well informed about certain crafts and craftsmen in Mycenaean Greece but what about their Minoan predecessors, in this case, potters? Judging from the finished products, the supposed organization of a palatial society, and several ethnological parallels, I will try to examine the persona of Minoan potters and argue in favor of a distinction between “rural” and “palatial” potters.

Introduction

“It is entirely likely that the conditions current among modern village potters also obtained in prehistory.”

Prudence M. Rice (1987)

Minoan Archaeology has already largely benefitted from technological developments and the progress of the natural sciences during the last century and will certainly continue to do so in the 21st century as well. The adoption of new methods and tools has altered virtually every field of archaeological research which naturally also includes pottery studies. Thin-section petrography, for example, by revealing the recipes of fabrics and clay pastes, enables us to trace the provenance of raw materials, and helps us understand the ancient technology of pottery-making. Thermoluminescence-analysis, to name just another, can deliver rather exact absolute dates for the firing of ceramic products and thus serves as an additional dating tool. These selected examples may only briefly highlight the immense impact of such procedures on our field of interest and it is superfluous to say how much appreciated they are.

Nevertheless, in the first part of this paper, I shall draw our attention to another source of information concerning the technology of producing ceramic vessels, one that tends to not progress and improve in the years to come, but is rather likely to disappear entirely: traditional pottery-making. The second part shall shed some light on the social status of potters in Minoan times, as proposed by various sources of information including iconography, the written record, and historic analogies.

Part I: The Pots

Observing traditional craftsmen may be the only opportunity to actually witness, and not just reconstruct, the entire process of fabricating a ceramic vessel from treating raw material to firing the finished product. A comparison of the Minoan workshop at Zominthos with a modern, traditional atelier at Margarithes offers several interesting clues and some striking analogies concerning the manufacture of clay vases over a time-span of nearly 3700 years.

It hardly appears possible to get a complete picture of production procedures and technological processes simply by relying on the limited physical clues most Minoan pottery ateliers offer. This is largely due to the fact that almost no workshop site has yielded a comprehensive combination of permanent installations, an architectural frame

1 Rice 1987, 52.
or specific finds such as raw materials, tools and “fresh” products. However, the unique state of preservation and the presence of built installations at Zominthos together with much of the potters’ toolkit and finished products do allow us to get an idea of Minoan pottery production techniques. This and a comparison with modern-day traditional pottery production on Crete may lead to a rather reliable reconstruction of Minoan ceramic technology.²

The Zominthian workshop certainly is one of the best preserved Minoan pottery workshops on Crete (fig. 1).³ It probably consisted of three rooms located in an annex to the main building, the northernmost room being the main area of the workshop. This room was completely excavated in the 1980s and has yielded a combination of built installations and diagnostic finds that securely identified the function of the room (fig. 2).⁴ The circular built basin was used to cleanse the raw material as indicated by the remains of pure, strained clay at the bottom of the basin. The built benches along the northern and southern walls of the room are of multi-functional character and several vases have been reported to have been found in situ placed upon them. Others had most probably been put on shelves on the walls, as indicated by the large amounts of carbonized wood found scattered in the area of the workshop.⁵ These vases had probably been arranged by shape since many vessels of similar type were discovered in close proximity and sometimes stacked into one another. The same can be observed at the traditional workshop at modern Margarithes where the vases have been sorted according to shape as well (fig. 3).

Margarithes itself has a long tradition of pottery making, and the manufacture of ceramics still is one of the main occupations of the village’s inhabitants. The ateliers were, and still are, located along the main road leading south, outside of the town-center. Several workshops are still in use; however, an even greater number has fallen

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³ Poursat 1996, 111.
⁴ Sakellarakis and Panagiotopoulos 2006, 57; Petракos 1988, fig. 139; Traunmüller 2009, 38.
The remains of kilns and potters’ pits are visible at various places and offer a glimpse of former industries. The most significant change in the work of the potters seems to have been the introduction of the electric kiln while the general techniques of preparation and formation of the clay are still practiced in ways that seem to have survived the passage of time from antiquity onwards. A single potter, whose workshop lies at the very edge of the settlement, still fires his wares in a traditional “kamini”, fueled by nothing but wood (fig. 4). The observation of this craftsman and his techniques may help to shed light on the process of ancient pottery production procedures and clarify some questions on the manufacture of vessels at Minoan Zominthos. The existence of such a “local” ethnographic parallel to the Zominthian workshop certainly provides much useful information and is thus preferable to comparisons with “exotic” craftsmanship such as Mesoamerican or African potters.

The first step in producing pottery is the localization and acquisition of the raw material since “a potter’s prime need is good clay”. Zominthos lies in a tectonic unit characterized by Tripolitza limestone and calcareous sediments. Several sources of clay have been localized on the Zominthian highland plateau, although no signs of ancient quarrying have been detected. Yet, there can be little doubt that the potters at Zominthos mainly relied on local clay beds in order to ensure their supply of raw material. The same also holds true for the modern potters of Margarithes who quarry their raw material only ca. 30 minutes outside of the village. The proximity and thus the unproblematic transportation of the clay was extremely desirable for the potters since no great amounts of raw material needed to be stored over a longer period of time. A certain reluctance to store larger amounts of clay has also been observed of modern potters on Crete and elsewhere.

“Clay as it is dug from the pit contains a variety of impurities including sticks, vegetable debris, sand and pebbles, and sometimes pieces of quartz and limestone.” Thus, the preparation of the clay is the next mandatory step after having acquired all necessary resources. This preparation may be divided into

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6 Leach 1960, 43; London 1989, fig. 35; Noble 1984, fig. 1.
8 C. Siart, pers. comm. A potter from Margarithes collected several clay samples from the immediate vicinity of Zominthos and fired a small amount of pots from them. The overall characteristics of the fabrics were quite comparable to those of Minoan vases; however, observable differences in colour may have been due to the firing in an electric kiln.
9 See also Arnold 1989, 32.
10 Hampe and Winter 1962, 88.
several different and successive steps involving breaking up the clay, weathering, refining and tempering. These steps are time- and labour-intensive but absolutely necessary in order to provide workable and plastic clay. Unfortunately, hardly any of these steps are visible in the archaeological record but can regularly be demonstrated on the basis of the final fabrics themselves.

There are several main methods of formation that may be used alternatively or in combination. They can broadly be divided into two classes: hand-made and wheel-made. Although a general chronological difference between hand-made and wheel-made wares exists, with the former preceding the latter. Hand-made techniques continued to be used especially for large and coarse vessels and sometimes also for miniature shapes. I shall refrain from discussing each method in detail at this point since all vases from Zominthos appear to have been thrown on the wheel. The formation on the wheel requires the set-up of the work-place of the potter. The various modes of setting up the potters’ wheel are known from several sources, including Egyptian reliefs and illustrations on Attic pottery, but also from experimental archaeology and modern parallels. Returning to Crete, the location where a wheel is set up may also be characterized by various factors. A pit that was used for this purpose was found at Mochlos, a pivot stone still in situ. Similar pits, although not built of stones but lowered into solid rock, can still be seen at Margarithes today. Alternatively, the wheel may be set up in a wooden structure, possibly incorporating also mud-brick structures. If the latter is the case, hardly any traces of it will survive archaeologically. It seems reasonable to suspect that this was the case at Zominthos where nothing, except for the wheel-head itself, remained of the original work-place of the potter. Regarding the situation in the pottery workshop at Margarithes and taking Evely’s, and Morrison and Park’s reconstructions at Mochlos into account, it appears very likely that the Zominthian wheel had been placed on an axle that revolved in a socket or pivot stone and was supported by a wooden structure. The missing socket or pivot stone may be explained by an observation made by Hampe and Winter at Khania: “Die Spindel der Fußscheibe dreht sich in einer Speckschwarte (derma chirino).” This does not suggest that the exact same method was used at Zominthos but may merely indicate that a solid socket or pivot stone is not necessarily needed to support a wheel.

The last stage before the firing of the vessels is the phase of decoration. The ways of decorating a vessel are manifold and differ regionally, chronologically and technically. In this paragraph I will briefly comment on the technical aspects only. The main distinction of decorative schemes may be “plastic decoration” vs. “painted decoration”. Both types are present in the assemblage from Zominthos, however, with the former only on two fragments of one vessel. Plastic decoration in LM I was usually restricted to large storage vessels such as pithoi and hardly found on small shapes and fine wares. Painted decoration clearly dominates the assemblage, especially if the application of slips is considered to be decorative as well. The paint is applied to the vessels’ surfaces by using a brush or by dipping the vase into a container filled with paint. The latter method is clearly observable on the so-called “dip-rim” cups or bowls, often with trickles running down the surfaces of the vessels. All of the painted de-

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12 “The ultimate concern in making clay vessels is a material’s plasticity and workability.” See Rice 1987, 52.
13 Evely 2000, 263.
14 See Evely 2000, figs. 105, 116; Schreiber 1999, figs. 2.8, 2.9, 3.1; Morrison, Park 2007–2008, figs. 1–2, 4; Rieth 1960, figs. 36–37, 39, 50–51, 55, 58.
16 Evely 2000, fig. 116 top.
17 Hampe and Winter 1965, 146.
19 For the decoration of pithoi, see Christakis 2005.
signs on the Zominthian vases have been drawn free-hand, as indicated by sometimes severe irregularities in form and layout. Unfortunately, no direct evidence for this stage of production can be found among the finds from the pottery workshop, except for the finished products themselves. At Magarathés the wife of the potter was in charge of the painted decoration which may lead to the question whether or not Minoan potters were also vase painters. But this problem shall not be pursued further at this point.

Firing poses the “most crucial test” for manufactured vases.\footnote{Evely 2000, 298.} Since Minoan potters hardly had any knowledge of the chemical and mineralogical components of their goods, the firing process and the control of the temperature within the kiln had to be learned simply by trial and error. And judging from the finished products, the “Minoans were quite up to the challenge …” with much expertise developing from Neolithic times onward.\footnote{Evely 2000, 298–300; Maniatis and Tite 1978, 483–92; Noll 1991, 83–118.} This becomes especially apparent with the fine wares of the MM and LM periods. The much appreciated studies on temperatures, chemical analysis, and behavior of different clays during the process of firing are here omitted since they result from modern technological examinations and are thus hardly applicable for improving our knowledge on original Minoan pottery manufacturing skills.\footnote{Evely 2000, 317.} Instead, observing and describing the firing process as conducted by traditional potters appears to be promising, particularly as they still employ much the same materials, kilns and methods that underwent few changes since “… by the closing days of the First Palaces, the potting craft was equipped with all the necessary skills and sensitivities.”\footnote{Evely 2000, 317.} First, the dried pots are carefully placed on the grate of the kiln. In the observed case, the kiln is a simple updraft kiln, fueled only by wood. Its walls are built of limestone rocks, which are bound and sealed by clay. The upper part of the kiln is made up of a dome-like structure of clay or mud-bricks. Its open top is covered with large sherds, stones and mats of organic material in order to create the closed chamber of the kiln. Next, the firing begins. Large amounts of wood are used to achieve the desired temperature which is subject only to the estimation and experience of the potter. The kiln needs to be continuously supplied with fuel over the entire period of firing in order to achieve the best possible results. After the time of the firing has expired, again only a matter of judgment by the potter, the fire is extinguished and the vessels are left to cool off. Unfortunately no traces of any of the stages of the firing process could be detected at Zominthos where almost nothing is known about the kiln except for its location north of Room 12.

However, the following stage, the storage of the completed vessels, is well attested at the site. Many vessels were found arranged by shape in Room 12, just as can be seen in the modern workshop at Magarathés. Vessels are placed upon wooden shelves on the walls or simply put on the ground in groups. The existence of wooden constructions such as shelves is very probable for Room 12 at Zominthos as well since fairly large amounts of carbonized wood were identified as the remains of such installations.

As we have seen, most of the manufacturing procedures of pottery making are at least partly recognizable in the finds and structural elements of the ceramic workshop at Zominthos. This allows a rather clear view on the different stages of pottery production in a Minoan, rural ceramic workshop and helps to understand both the technical measures and achievements as well as individual skills and innovations of the potters of Neopalatial Crete. The comparison with a modern-day, traditional workshop showed overwhelming similarities with its Bronze Age predecessor and demonstrates the long continuity of manufacturing procedures over centuries, as long as similar external conditions prevail.

Part II. The Potters

After presenting the workshops and modes of production, it seems appropriate to throw some light on the people who actually made the vases that so greatly dominate the archaeological record all over the Aegean and elsewhere. Apart from his/her work – the finished pots – little is known about the Minoan “Kerameus”.\footnote{Eckstein 1974, 26–7.} Nevertheless, it may be of interest to have a closer look at the little information we may be able to gather on the artists themselves, in order to get a fuller picture of their work. Before commenting on the iconography, the written sources, and the social position of Minoan potters, I would like to utter some rather general thoughts on their craft with special reference to the situation at Zominthos.

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\footnote{Evely 2000, 298.}
\footnote{Evely 2000, 300.}
\footnote{See, for example, Evely 2000, 298–300; Maniatis and Tite 1978, 483–92; Noll 1991, 83–118.}
\footnote{Evely 2000, 317.}
\footnote{Eckstein 1974, 26–7.}
Pottery making in the Aegean and Eastern Mediterranean has always been and still is considered to be a seasonal occupation. It is apparently restricted to the summer months, slightly varying between single sites according to regional differences in temperature and rainfall. The period usually starts in April or May and may extend to September and sometimes even to November, as recorded for Cyprus. During the cold and wet winter months rain inhibits clay mining and the drying of vessels outdoors, and moist wood cannot easily be used to fire the kiln. Low temperatures also complicate the stages of production that are carried out in the open or may even make it completely impossible to work unsheltered. This must have been especially important for the workshop at Zominthos, located at an altitude of roughly 1200 m asl. Here, the season of pottery manufacture can have begun in April at the earliest, more probably in May, and can hardly have lasted until the beginning of October. This leads to the question what the potters did beyond the season of their primary occupation. It has been suggested that they pursued agricultural occupations as did most of the traditional potters studied by Hampe and Winter during the 1960s in Thrapsano on Crete. These potters, however, seem to have followed both occupations during the same season and not one after the other, especially since most agricultural activities, except animal husbandry which is a year-round occupation, are also carried out during the spring and summer months. At Zominthos, animal husbandry and the production of dairy products are the only possible agricultural endeavors that might possibly have been carried out during the winter due to the climatic conditions of the site. However, it is far more likely that the animals had to be taken to lower pasture lands instead of being left to stay in the mountains. Textile production was most probably another main industry at Zominthos but this required its own specialists. It remains thus questionable what the Minoan potters of Zominthos did during the winter months.

Leaving Zominthos and its rather special geographic location aside, some other problems concern the “semi-professional” potters of Minoan Crete. To me it appears useful to differentiate between potters that can be associated with palatial centers and potters that worked in rural areas and villages. The only arguments in favor of this division are the few times a potter is mentioned on Linear B tablets and of course the vases themselves. Judging from the finished products, at least some of the Minoan potters must have been highly specialized craftsmen. These specialists are best associated with palatial centers. Their level of expertise and skill could hardly have been achieved by a part-time potter who also had to invest time in keeping life-stock or working on his (or someone else’s) fields. On the other hand, the products of rural potters, although showing some skill as well, are often of a lower quality than the finest vases of palatial workshops.

Potters are mentioned on some of the Pylos and Knossos Linear B tablets which even name two artists, qe-ta-ko and pi-ri-ta-wo, the latter being described as wa-na-ka-te-ro – “royal” – and belonging to the group of “te-re-ta who hold ko-to-na ki-ti-me-na land that they can sub-lease”. These written sources do of course relate to a later phase in Greek prehistory but a comparison of the Minoan and Mycenaean Palatial System and their economies does make good sense. The distinction between different modes of craft production has already been proposed by Brumfield and Earle who separated “attached” and “independent specialization”. This distinction has then been applied to archaeological contexts by Costin (among others) who ascribed “attached specialists” to artists that worked for an elite producing prestige items, and “independent specialists” who produced utilitarian objects for non-elite consumption. The focus on luxury and prestige goods and the very sharp differentiation between the two modes of production may be misleading, as shown by Knappett, but the general idea of a distinction between “attached” and “independent specialists” suits a possible distinction between Minoan palatial and rural potters. The lack of direct evidence for a palatial control of at least parts of pottery manufacture in Minoan Crete does naturally weaken this assumption, and it is of course very tentative to suggest that there might be a relation between rural potters and agricultural occupations while palatial potters engaged in other, possibly craft-related occupations. It is apparently restricted to the summer months, slightly varying between single sites according to regional differences in temperature and rainfall, and it is of course very tentative to suggest that there might be a relation between rural potters and agricultural occupations while palatial potters engaged in other, possibly craft-related occupations.

25 See, for example, Hampe and Winter 1962, 104; Blitzer 1984, 145; London 1989, 52.
26 London 1989, 52.
27 MacGillivray 1987, 277.
29 Hampe and Winter 1962, 5.
30 Maybe we ought to put aside modern views of productivity and the obligation to work day by day. In a society where goods were produced only when needed and only in sufficient numbers, a long period of rest during the winter months appears at least imaginable. This may vary considerably from site to site but a general tendency towards a period of rest or at least limited activities during the winter months including agriculture and seafaring is well attested for the Aegean and Crete.
31 Knappett 2001, 85; Palaima 1997, 410. The name pi-ri-ta-wo is listed on PY En 467 and Eo 371, qe-ta-ko is mentioned on Cn 1287.4.
33 Costin 1991.
34 Knappett 2001, 87–94.
activities during the winter months. However, it is a very tempting image. To go even further, the institution of the palace would surely have required a large quantity of ceramic vessels which may even have demanded year-round production. On the other hand, the palaces may also have acquired enough vessels during the potting season from rural as well as palatial potters, by direct or indirect taxation or other obligations, which would then go well with a seasonal nature of pottery production. Unfortunately, this problem will not be solved here and requires still more written and archaeological material evidence in order to be satisfactorily dealt with.

Nonetheless, and taking into account the differences between workshops in small, rural communities and large urban environments, a broad division of palatial and rural workshops appears reasonable and suits the varying demands and clientele of every potter. Potters affiliated with the palaces may also have had much better working conditions that allowed for production throughout the entire year, considering storage space for raw material and finished products. The potter of Zominthos, being attached to a villa, ought to be considered rather rural than palatial, which also shows in the quality of his products and limited range of shapes.

Representations of potters are very rarely found in Minoan Art. The depiction of human beings and other figural motifs in general is almost exclusively restricted to wall-paintings and seals. Minoan Wall paintings usually did not portray profane activities such as craftsmanship but were mainly reserved for somewhat religious or sacral imagery, including depictions of nature. Pottery never played an important role as a medium for figural illustrations in Minoan Art, apart from the LM IB Marine Style vases which did not show human figures, and very few examples decorated in the MM Kamares style. It is thus hardly surprising that the only known Minoan depictions of potters have been identified on seals. They come from very few sites and are mainly dated to the Pre- and Protopalatial periods. A number of three-sided steatite prism-seals was found in the stone carving workshop at Malia, datable to MM IB–II. They mostly show a probably male figure laying a hand on a vessel next to it. Whether or not the person on the seal is actually potting has to remain uncertain. Another three-sided steatite prism of unknown provenance in the Wiegandt collection in Marburg also shows a human figure in immediate connection to a large pithos and an amphora above it. Two three-sided steatite prism beads from Kastelli Pediada also have characteristic depictions of human figures with ceramic vessels. Finally, a three-sided steatite prism from the area of Knossos shows a female figure handling a round vessel above a two-handled vase. Even if one does accept the identification of potters on these seals, the information that can be drawn from them still remains very limited. The only rather secure piece of information concerns the gender of the artists: Except for one example all potters are male. However, the scene from the area of Knossos and the feminine form ke-ra-me-ja on one tablet (Ap 639) from the same site suggest that women as well engaged in pottery manufacturing. This is supported by the observations of Hampe and Winter on Crete, as well as the studies by London on Cyprus. Unfortunately no depictions of the actual production of ceramic vessels are clearly recognizable on Minoan seals. This is by no means surprising considering the non-narrative function of the seals as administrative tokens and their small size. However, Egyptian representations from various tombs of the Old to New kingdoms show organized pottery workshops including the staff and all stages of the manufacturing process in detail. These illustrations may not be uncritically transferred and applied to Cretan Neopalatial workshops but might just give a broad impression on how to imagine the daily routine in such an atelier.

A second source of information on the actual people that worked as potters are the Linear B tablets found in some palatial sites on the mainland and Crete. Mycenaean bureaucracy registered various fields of the economy and craftsmen are listed in different contexts. However, the limited number of recorded potters sharply contrasts the vast amount of vases produced by them. This may be due to the fact that pottery making probably was a kind of

35 See also Branigan 1983, 26.
36 For depictions of human beings on seals, see Yule 1980, 118–21.
37 See, for example, Morgan 2005.
38 Walberg 1976, 194, figs. vi.1–4.
39 Michaelidis 1993, 26; CMS II.2, nos. 118a, 178a, 179a, 190a; Yule 1980, pl. 2, nos. 34, 37, 39.
40 CMS XI, no. 122a.
41 Kenna 1960, 92–3, nos. 38–39, pl. 2; Michaelidis 1993, figs. 9a, b.
42 CMS XIII, no. 80; Michaelidis 1993, fig. 9c.
43 Michaelidis 1993, 26–7; Bennet et al. 1956, 6.
45 Singer et al. 1958, figs. 232, 234, 243; Michaelidis 1993, fig. 10.
46 Bech and Gregersen 1997, 43.
“Basisindustrie” unlike the production of luxury and prestige goods which are mentioned far more often. Unfortunately little more than a description of the potters’ occupation is mentioned, and none of the stages of production is referred to in detail.  

The Linear B term for potter is ke-ra-me-u. Several grammatical forms of the root of this word have been identified on a relatively small number of tablets from Pyllos, Mycenae and Knossos. One tablet was found at Knossos, one at Mycenae and four at Pyllos. In two cases the potters are even called by their names: pi-ri-ta-wo and qe-ta-ko. As already mentioned, the first of these names is attributed with the adjective wa-na-ka-te-ro which may define this potter as a potter or a member of a group of craftsmen working either exclusively or at least mainly for the demands of the elite. That is, if the title was not “… more ad hominem rather than directly reflecting the scale or nature of the contribution of that individual to the palace”. 

In summary, it appears that the tablets support the notion that both men and women worked as potters and that some workshops may have been affiliated with the palaces. Finally, the tablets from Pyllos give us at least two names of potters which remind us that we are actually talking about living people and their occupations and daily life.

Pottery manufacture and thus those who exercise it are “… embedded in society …” and “… bound equally by practical/physical and social constraints”. The question that shall be considered here for a moment concerns the social position and consequently the possibilities and limitations in Neopalatial society of those who produced the vessels that so greatly influence our modern understanding and imagination of ancient Minoan culture.

Before I start presenting some thoughts on the social status of Minoan potters it must be stated that absolutely no direct archaeological evidence and information on the topic exists and everything that is uttered here is purely speculative. And without written sources this will remain the case, I regrettably suppose. Nevertheless, more general reflections on social and economic relations and comparisons with other ancient cultures of the eastern Mediterranean and the Near and Middle East as well as ethnological parallels may possibly help us understand the social role of Neopalatial potters on Crete. The following may respectively be viewed as no more than an attempt to interpret the pottery-makers’ status in Late Minoan times.

This enterprise inevitably leads to aspects of “specialization”, “dependency”, and “clientele” of Minoan potters and their workshops. Minoan potters were not a homogeneous group of craftsmen more or less working under the same conditions and restraints. It seems probable that the larger part of the group belonged to potters that have here been called “rural”, meaning that they worked primarily as potters but also engaged in agricultural activities such as farming or animal husbandry. These potters were most probably situated throughout the entire countryside of Neopalatial Crete, providing vessels for their own small communities as well as for larger administrative centers by means of tribute or taxes to the authorities. A smaller group of potters seems to have been a highly specialized workforce producing luxury and prestige items mainly for the needs and demands of the palaces/élites. These potters have been labeled “royal” or “palatial”, meaning that they were mostly and directly dependent on these institutions of power. Their typical products would have been, for example, Middle Minoan Kamares Ware and LM IB Marine Style pottery. This is not meant to imply that exactly the same political and social circumstances existed in MM I and LM I, but both Old and New Palaces seem to have had a direct influence on the crafts and craftsmen. Since written sources on the topic are lacking, it may prove useful to turn to the Near East to look for further information.

During the Late Bronze Age, Mesopotamia was a region of large territorial states with a clearly established “palace economy”. While the political situation of Neopalatial Crete is not undisputed, these states offer tempting analogies for Crete and, later, Mycenaean Greece. The Mesopotamian records distinguish between what has been called a group of “free citizens” and the “king’s people” within the palace economies of the Near and

47 Hiller 2004, 384; see also Haskell 1997, 107: “… although the Linear B tablets make very few references to pottery production, we all know that Mycenaean pottery in the IIIB period was produced in great abundance. But, bureaucrats at central administrative centers reveal little direct interest in pottery production.”


49 ke-ra-me-u (Nom. Sing.) on PY Cn 1287; ke-ra-me-we (Nom. Dual) on PY An 207; ke-ra-me-wo (Gen. Sing.) on PY En 467 and PY Eo 371; ke-ra-me- wi (Dat. Sing.) on MY Oc 125; the female form ke-ra-me-ja is found on Kn Ap 639. See Ventris and Chadwick 1973, Glossary 553.

50 The name pi-ri-ta-wo is listed on PY En 467 and Eo 371, qe-ta-ko is mentioned on Cn 1287.4.


52 Day et al. 2006, 28.


54 Foster 1987, 12.
Middle East. It seems that both communal and even private land tenure existed as well as land that was the property of the palace/ruler which was then granted to his associates. This concerns mainly the agricultural surplus production and not so much the crafts and industries but certain similarities appear to have existed. However, “in contrast to agriculture and commerce, the relationship among Late Bronze Age Western Asiatic palace economies and industrial production has been little explored …”. Still, the existence of craftsmen directly related to the palaces is also known in Mesopotamia. Unfortunately the written records date to the Early Bronze Age and do not list potters among the craftsman associated with a palace. Nevertheless it still seems probable that “some craftsmen were fully dependent on palace economies and worked for them in return for a ration dole or plots of palace land on which to maintain their families. Others were members of the community of free citizens and produced how and for whom the market required”. Whether or not potters were among these craftsmen has to remain unanswered.

Egypt, although highly centralized and focused on the person of the Pharaoh, shows a number of differences but also some general analogies to the Near and Middle East. Contacts to Neopalatial Crete are abundantly recorded, and it may thus prove useful to look for inspirations regarding the reconstruction of the nature of the Cretan workforce here. Thanks to innumerable written accounts we are quite well informed about the organization of the labor force in Egypt from the Old Kingdom onwards. This organization is explicitly expressed through numerous titles and offices that characterize the hierarchy of different craftsmen and workers. It becomes very clear that among the producers, craftsmen and artisans formed a higher status group than ordinary workmen. In particular, the higher ranks within this group seem to have been in close relationship to the king. It may thus be regarded as certain that “royal” craftsmen formed a defined social group in Egypt. The degree of this relationship to the king and whether an independent market and trade existed or not is rather uncertain. However, a small number of depictions from tombs showing market scenes suggests that at least some private enterprise had existed as well. And indeed, “[i]t would be an extraordinarily rigid social organization that had no local trade in such commodities among the lower classes”. Good evidence for this open market comes from Deir el Medina, a settlement of New Kingdom tomb builders, where specialized workers also produced goods for their own benefit “on the side”. However, during the New Kingdom “the degree to which craft ateliers or specialized workforces might be independent of state or institutional authority is unclear”. The Egyptian written sources do not mention potters among the crafts directly related to the king or state. This may be due to the everyday character of the items they produced and the low level of prestige and status connected to the vessels. That the state and palace required pottery goes without saying; however, the potters of Egypt seem to have been largely independent due to the nature of their produce.

Before summarizing the analogies from different ancient cultures and deducing possible aspects relevant for Cretan potters, I shall briefly give an account of some modern ethnological parallels. On their visit to Camerota, a potters’ village in Campania, Hampe and Winter described the living conditions of the potters as very modest. Most of them did not own the workshop in which they worked but had to pay a lease to the landlord. Such low social status is also known from other societies with hierarchically arranged groups, e.g. in Peru, Mexico, India and elsewhere. A common reason for this low status might be seen in the utilitarian character of the pottery. However, contradictory examples, even from the same geographical regions such as Mexico or Guatemala, exist as well. Potters may also have a high social position often resulting from contextual factors such as a steady income or even wealth acquired through trade of highly valued pieces. An example for such highly valued pieces may be seen in medieval Islamic tiles that were needed to decorate mosques. The production of such tiles could have led to a

55 Foster 1987, 12.
56 Foster 1987, 15.
57 Foster 1987, 15; see also Evely 2000, 557–58.
59 Evely 1987, 26–7; Evely 2000, 555.
60 See, for example, Moussa and Altenmüller 1977, fig. 10.
63 Evely 1987a, 199.
64 In the “Lehre des Bw3-Htjj” a father urges his son to become a scribe in order not to suffer from the consequences of hard work connected to several crafts, including pottery. The description of the potters gives a hint at the low social position of these people in Ancient Egypt: “Der Töpfer ist unter der Erde, obwohl seine Lebenszeit noch unter den Lebenden ist, indem er sich in das Feld hineinhüht mehr als die Schweine, um seine Gefäße zu brennen.” See Helck 1970, 53–7.
66 Arnold 1989, 196.
67 Arnold 1989, 197.
higher social status of an Islamic potter in comparison to his European Christian counterparts. Nevertheless, even in this case, the decisive factor for social status is the actual or symbolic value of the produced goods. In terms of Minoan Crete, LM IB Marine Style pottery, for example, may well have qualified as such a valuable item.

As shown by ancient and modern ethnological parallels, no definite or generally valid statements on the social status of the Minoan potter can be expressed. On the contrary, the social position of the potter seems to have been directly related to the actual worth, and even more importantly, the symbolic meaning and prestige of the produced object. This does comply with a postulation of social divisions within the workforce, in general, and even within single groups of craftsmen, in particular. Thus, a division between “rural” and “royal” or “palatial” potters for Neopalatial Crete may in fact approximate historical reality. The former category being composed of part-time craftsmen who also engaged in agricultural activities during the autumn and winter months, either for their own benefit or as services to a higher authority, the second group being a rather small group of highly specialized artisans that worked mainly, or even exclusively, for the demands of the elite.

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68 Hodges 1974.
69 For an example of a tripartite division of a workforce, see Steinkeller 1987, 100–1. He distinguished “(a) workers employed full time in productive type of labor, without means of production, receiving rations throughout the whole year …; (b) workers employed part-time in productive type of labor, with means of production, possessing land allotments in return for services, receiving rations for the duration of their work duty, cultivating their land allotments themselves …; (c) managers (various types of administrators, military officers, priests, etc.), employed full time in non-productive type of labor, with means of production, possessing land allotments in return for services, their land allotments being cultivated by the workers of the a and b categories.”
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Transmediterranean Knowledge and Minoan Style Reliefs in Tell el Dab'a

An Attempt at Paradigm Shift*

Constance von Rüden

At Tell el-Qirqafa/Ezbet Helmi, just west of Tell el Dab'a in the Eastern Nile delta, a large amount of “Aegean” type wall paintings has been excavated since the beginning of the 1990s. Tens of thousands of lime plaster fragments were dispersed in front of the entrances of two palaces of the Tuthmoside period, palaces F and G, on the eastern bank of the former Pelusiac branch of the Nile. In contrast to other sites with fresco paintings in the Middle East, the findings from Tell el Dab'a are not restricted to paintings with a flat surface since about 350 fragments of stucco relief have also been identified until now. The following paper aims to sum up some aspects of the current discussion about Aegean-style wall paintings in the Middle East and to challenge narrowing research to a hypothesis of “itinerant craftsmen”. This will be done by introducing a theoretical approach that emphasizes the links between knowledge distribution and materiality in the Eastern Mediterranean. The potential of such a perspective will be further demonstrated by comparing the reliefs from Tell el Dab'a with the Cretan material. The very early stage of the investigation allows for no definite answers, and this paper will most probably generate more new questions than it attempts to answer, but it will hopefully show the need for a change of paradigm in this field of research.

The Allure of the Idea of Itinerant Craftsmen in the Eastern Mediterranean

Archaeological research on frescoes in the Middle East during the last 20 years has been dominated by a specific discourse, which concentrates primarily on the theme of “travelling craftsmen”. With regard to wall paintings this idea was already introduced in 1953 by Woolley in his attempt to explain similarities between the Alalakh paintings in the northern Levant and those from Knossos. Because of the chronological framework used at the time, and his desire to find Asiatic origins in Minoan palaces and arts, he attributed the latter to itinerant Asiatic craftsmen, assuming thus a mobility of people and ideas from east to west. With the discovery of the frescoes from Tel Kabri in Palestine in the 1990s, the topic came up again. In 1991 Niemeier suggested “Minoan artisans travelling overseas” as an explanation for the wall paintings of Tell Kabri, noting that, “… they show a purely Minoan iconography as well as technique. This can only mean they were executed by travelling Minoan artisans”. Shortly thereafter, fresco fragments with Minoan parallels were uncovered in Tell el Dab'a (fig. 1). The argument of Minoan craftsmen was adopted as an explanation for this site as well – but in this case it was argued that the craftsmen embodied a Knossos tradition. Manfred Bietak developed the idea much further by proposing two possible social settings: either a Minoan-Egyptian intermarriage or another intercultural event, for which the two palaces were furnished. Triggered by the new developments in this field of research and the re-emerging discussion, Barbara and

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1 Woolley 1955, 228–32; see also Woolley 1953, 74–5: “we are bound to believe that trained experts, members of the Architects’ and Painters’ Guilds, were invited to travel overseas from Asia (possibly from Alalakh …) to build and decorate the palace of the Cretan rulers”.


4 Bietak 1992, 28; Bietak and Marinatos 1995, 61; Marinatos refers to the wall paintings in Tell el Dab'a simply as Minoan, Marinatos 1995, 579; for non-Minoan craftsmen, but trained in Knossos, see Shaw 1995, 94.

Fig. 1   Reconstruction of the Tuthmoside palace district (reconstruction by M. Bietak and N. Math; after Bietak et al. 2007, 21, fig. 13).
Wolf-Dietrich Niemeier re-examined the Alalakh frescoes. They reversed Woolley’s forty-year-old argument and finally declared Alalakh to be similar to Tel Kabri and Tell el Dab’ a and proposed three different possible scenarios in order to explain the underlying processes of this phenomenon in the Middle East: (1) the frescoes were painted by travelling Aegean artisans, (2) they were painted under the supervision of Aegean artists with the assistance of Levantine painters trained by them or (3) by Levantine painters trained by Aegean masters.

This discourse has been supplemented by many scholars, either by calling for caution with regard to a possibly premature interpretation in favor of itinerant Minoan craftsmen or by arguing against this hypothesis altogether. Vronwy Hankey warned the scientific community in 1993 that “it is premature to attribute the (Avaris) frescoes to Minoan artists when very little is known about Near Eastern painting between those at Mari (18th century BC) and those from Alalakh VII, Tell Kabri and Tell el Dab’ a (17th to 16th century BC).” Even today her warning must be taken seriously, despite the fact that a number of sites with wall paintings in the Middle East have been discovered recently. Iconographic peculiarities as a possible argument against Minoan craftsmen in the Near East have been brought up by Susan Sherratt in 1994, John Younger in 1995, as well as by Paul Rehak in 1996 and 1997. Because of idiosyncrasies in the bull leaping scenes of Tell el-Dab’ a, John Younger called for caution in terms of “the nationality of their painter(s).” Maria Shaw considered Aegean craftsmen to be unlikely “in the strict sense of the term”. In her view, should we be dealing here with Minoan craftsmen, then “they have been abroad long enough to have drifted away artistically from the canonic Minoan method of representation. They would be second or third generation of expatriates.”

It is evident that regardless of whether researchers were arguing in favor of or against Aegean craftsmen in the Middle East, much of the discourse on wall paintings revolves around this idea, while many other questions and approaches have been marginalized. Even in the discussion of the new findings from Qatna at the very beginning of the new millennium and the recent findings from Tel Kabri the issue still features prominently.

To regard itinerant craftsmen as responsible for the appearance of fresco paintings in the Middle East is a very legitimate approach and its value is not underestimated here. The practice itself was very common in the Eastern Mediterranean, as specialists of various professions, such as sculptors, master builders or physicians, were exchanged between palaces. Nonetheless, to identify such an event in the archaeological material is often difficult and a matter of endless debate: the paintings of the Aegean, especially from Crete and the Cyclades, seem to lack an exact repetitive canon, either in iconography or in technique; a one-to-one parallel, therefore, is often hard to detect. Additionally, these paintings are relatively few in number, coming predominantly from specific periods. Even if it is highly attractive to trace such a direct form of agency in the archaeological record, the discussion mostly ends with the same question: Is the technology and the iconography of a painting “Aegean” enough, so that it can be seen as the work of Aegean craftsmen? Often we are even confronted with quite conflicting opinions based on similar arguments and on the very same material. These uncertainties allow room for many speculations, also depending on the individual preferences of the researcher.

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6 Niemeier and Niemeier 1998, 93. The latter scenario by Niemeier was similarly already proposed in 1995 by Shaw (1995, 110) with regard to the bull leaping scenes of Tell el Dab’ a. She argued that the painters had been trained on Crete, almost certainly in Knossos.

7 Hankey 1993, 28.

8 With the new findings in Tell Mardikh/Ebla (Bietak 2007, 273), Tell Sakka (Taraqji 1999, 27–43) and Tell el-Burak (Kamlah and Sader 2010, 108–11), more material is available for comparison, but their final publication with detailed technical and iconographical studies are still forthcoming.

9 Sherratt 1994, 237.


11 The choice of yellow instead of white for leapers, the scale of the figures; as well she considered the depiction of a bull with a frontal face as an iconographic characteristic of the later periods on Crete, but acting on the assumption of a date in the Hyksos period for the Tell el Dab’ a paintings; see Shaw 1995, 105.


14 Shaw 1995, 105–6, esp. 106.

15 von Rüden 2011, esp. 95–9; see also Brysbaert 2008, 2011.

16 Cline et al. 2011, 13–4.


18 Bietak 2000.
Furthermore, given the ethnic connotations often implied in terms like Minoan\(^{19}\) or Canaanite, the discourse on travelling craftsmen and their impact can become very delicate.\(^{20}\) It seems that in many studies in the 1990s people from the Aegean, most notably the Minoans, became the dominant actors in our narrative of an intercultural crafting network in the Eastern Mediterranean, while people in the Levant and the Nile delta were portrayed as passive recipients. Furthermore, in the search for the earliest fresco in the Eastern Mediterranean lies the danger that the matter becomes a race between two specific ethnic groups, either the “Minoans” as the “earliest European civilization”\(^{21}\) or the “Canaanites” as their counterpart in the Middle East,\(^{22}\) arriving there first and which people can be considered as the inventor of this sophisticated technique and/or iconography.

In my view this approach and the discourse about itinerant craftsmen has led us, at least for the moment, to some sort of dead-end. But this gives us an opportunity to explore this phenomenon anew from various perspectives. The purpose here is not to deny or even underestimate the impact of specific actors such as craftsmen in Eastern Mediterranean interrelations; on the contrary, the aim is to open up again our research perspectives to various forms of interaction in which the fresco paintings are embedded.

**Frescoes and the Eastern Mediterranean Koiné**

The necessity to place wall paintings within a network of Eastern Mediterranean relations was already noticed in the 1990s, but unfortunately it has been barely developed. Already in 1994, Ora Negbi tried to embed fresco paintings of the Middle East into a wider picture of exchange in the Eastern Mediterranean.\(^{23}\) But despite her multifaceted account of interactions, her unchallenged adherence to the idea of Aegean craftsmen leads to a view of wall paintings from different sites as a homogenous phenomenon. This did not allow her to take into account distinct chronological and cultural contexts or even a possible hybrid character of at least some of the examples, which would have meant that they themselves were the outcome of a more complex interaction.\(^{24}\)

In a response to Negbi’s article, Susan Sherratt challenged the hypothesis of Minoan craftsmen in the Middle East with the following remark: “if Bietak had got to Daba and Niemeier to Kabri, before Evans got to Knossos, I doubt if the question of a diaspora of Aegean artists to the East would seriously have arisen”;\(^{25}\) she also considered the relation of these sites to the Aegean “in terms of the forging of an elite koiné – artistic, iconographical, ideological and technical – in the circumstances of an intense maritime interaction between coastal areas of the eastern Mediterranean”.\(^{26}\) Her idea broadened the view of this field of research by taking into consideration the multiple impact the rich intercultural contact of the second millennium B.C. might have had on that phenomenon.\(^{27}\) Unfortunately, her approach to consider the paintings as an outcome of the very complex interaction in the Eastern Mediterranean or even as a result of an Eastern Mediterranean koiné is until now hardly developed. It seems to be used mainly to argue, in general terms, against the dominance of the thesis of itinerant craftsmen. Moreover, to date, the Eastern Mediterranean koiné appears as a “big cloud” absorbing any kind of transcultural phenomena in the material culture of the region. In the end, it becomes a kind of label that we can stick on pots, ivories, metal vessels or on wall paintings. But what does that exactly mean?

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\(^{19}\) Even though Barbara and Wolf-Dietrich Niemeier consider it as “hopeless to believe that archaeological evidence can identify ethnical groups in the past”, they believe that “Artifacts can, however, be taken and consciously employed as emblemic indica of ethnic boundaries in much the same way as language or religion” (Niemeier and Niemeier 1998, 92) and therefore they use Minoan not as a term for a geographical region, but in relation to an ethnic group. More cautious is the use of the term “Minoan” or “Mycenaean” referring to archaeological cultures based on the idea of a social identity by Ann Brysbaert (Brysbaert 2008, 23–4).

\(^{20}\) See also Susan Sherratt (Sherratt 1994, 237) and A. Bernard Knapp (Knapp 1998).

\(^{21}\) For a more extensive discussion, see Hamilakis and Monighianno 2006.

\(^{22}\) About an attribution to ethnicity with regard to the question of itinerant craftsmen, see also Susan Sherratt (Sherratt 1994, 237) and A. Bernard Knapp (Knapp 1998, 201–2). Knapp expressed his doubts also by challenging “what is Canaanite iconography?”, a term used by Niemeier to describe an iconography from which he wanted to set apart the wall paintings from Tel Kabri (Knapp as a response to a paper of Barbara and Wolf-Dietrich Niemeiers at the Aegaeum conference in 1997, published 1998, 98). The term “Greater Canaan” has been used by Niemeier, following Amiran, to describe the area between the Amuq plain to the north and the deserts to the south and east, which appeared to him as a largely uniform civilization, with regional variations, in the Middle and Late Bronze Age (Niemeier 1991, 196; Amiran 1969, 167–70). The uniformity expressed by this term has to be strongly questioned, and given especially its ethnic and political connotations, it has to be treated with caution.

\(^{23}\) Negbi 1994, 73–112, esp. 77–81.

\(^{24}\) See von Rüden 2011.

\(^{25}\) Sherratt 1994, 238.

\(^{26}\) Sherratt 1994.

In her book *Diplomacy by Design*, Marian Feldman further developed the idea of an artistic koiné by discussing luxury objects earlier defined by Smith, somehow anachronistically, as “international style”-objects. The objects seem to have adopted motifs from different regions of the Eastern Mediterranean, making it nearly impossible to assign them to a specific regional material culture. Feldman regards them as part of an interregional communication, used also in the formation of identities. Nonetheless, she does not consider as belonging to this category objects with a clear citation of one specific regional material culture, as is the case for wall paintings. Even though the wall paintings cannot be seen as an “international koiné”-object in the sense of Feldman, nonetheless they must be a result of an Eastern Mediterranean interaction – either with or without Minoan craftsmen. The different ways in which their techniques, motifs or whole iconographic concepts were distributed, locally negotiated and adapted is still a matter to be explored. And the question then arises: how can we explore the diversity of interaction through an understanding of its materiality?

Some Thoughts on an Alternative Theoretical and Methodological Approach

Instead of arguing for or against the concept of itinerant craftspeople, I want to explore the different forms of knowledge involved in the production and use of wall paintings at the different sites of the Eastern Mediterranean and to ask how these bodies of knowledge might have interacted. The practice in which objects are integrated can tell us a lot about the available knowledge and its particular social setting. Rethinking the interrelation between materiality, practice and knowledge constitutes therefore my main theoretical approach and at the same time represents the challenge of the study. In this section, I will focus on how knowledge forms can be ascertained by reconstructing the production of relief paintings in the Aegean and in Tell el Dab’a.

Igor Kopytoff’s idea of an object biography serves here as a general methodological guideline in order to analyze the murals in their different moments of production and use. His concept should help us define the different tasks involved, from the acquisition of raw materials to the deposition of the object in an archaeological context. Most studies dealing with object biographies emphasize the crucial issue of change and negotiation of meanings in its different social setting. The present study aims at widening the idea and asks more generally which knowledge is involved and experienced in the different moments of human-thing entanglement. The importance of this question becomes evident if we want to understand the networks by which knowledge is distributed in the Eastern Mediterranean. While explicit knowledge can be transmitted by texts, or by painted pottery and textiles, many implicit knowledge forms, such as complex manufacture skills or the habitualized use of space, cannot be distributed without personal contact accompanied by time-consuming communication and mimicking. It revolves in many cases around what is known since Polanyi as “tacit knowing”.

Production of Relief Plaster in Tell el Dab’a – A Knowledge Approach

One can assume that only around 5% of the total amount of wall paintings is preserved in Tell el Dab’a. It is therefore often difficult to understand single motifs, and to reconstruct the whole syntax of a painting is a very challenging task. The reliefs originating from palace F and G depict, among other things, quietly walking bulls or cows, a white human leg with blue shoes (fig. 2), fragments of a human holding an ochre pole or a lion’s paw. The motifs themselves have parallels in Knossian reliefs or Cretan iconography, but because of their fragmentary condition, parallels in the syntax of the paintings are more difficult to assign and will present a challenge to future research.

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28 For a definition of that term, see Feldman 2002, 6–8; 2006, 25–9, relying partly on Smith’s idea of “international style”, see Smith 1965, esp. 35, 97.
29 Feldman 2006, 30; see more explicitly in regard to the wall paintings, Feldman 2007, 44, n. 8.
30 With regard to painting on a flat surface, Ann Brysbaert’s technical study provides a very important and excellent base for further comparative studies (Brysbaert 2008, 2011).
31 See also Marchand 2010.
32 Kopytoff 1986, 64–94.
33 Compared to the concept of the more production-focused chaîne opératoire, suggested by André Leroi-Gourhan already in 1966 (Leroi-Gourhan 1964–1965), it has the advantage of also including the social life of the finished object; but of course the chaîne opératoire remains an integral part of the general approach.
35 See also Marchand 2010, S1–21; Hodder 2012.
A detailed analysis of the relief plaster from Tell el Dab’a gives us some indication of the chaîne opératoire or “work flow” of its production. By focusing on the application of the relief on the background, I would like to illustrate the qualitative difference of some of the techniques, which hint at the distinctive knowledge necessary for the procedures involved. Such a characterization helps to reconstruct the social framework in which these techniques and thus the associated knowledge might have been transferred and distributed.

Most of the reliefs from Tell el Dab’a have been recovered without the background plane on which they originally were attached. This rather unfortunate find circumstance provides us with an interesting insight into the sequence of operations. In some cases the sculptured material came off exactly at the joint to the background, exposing roughly flat backsides; obviously this spot was the predetermined breaking point. The backs show thin crossing ridges, around 1–3 mm high and sometimes arranged net-like (fig. 3). Additionally, they show remains of red color, most prominently at the edges of the reliefs (fig. 4). These observations give us an idea of the method of planning. Obviously the outline of the sculptured representation was firstly applied with a red preliminary drawing on the freshly plastered background plane. In their interstices, thin lines have been incised as anchorages for the application of the sculptured material. Only after all this preparation could the craftsperson apply the sculptured plaster, which absorbed the color of the red preliminary drawings on its back (fig. 4).

Up to this stage, the practice described might be explained verbally and is therefore a matter of discursive knowledge, transferable via written sources, sketches or orally. Following such instructions, any person skilled in the treatment of lime plaster could have achieved similar results. We can thus describe this as explicit, hence expressible knowledge.

The subsequent working steps, however, especially the application of the sculptured plaster layers, require, in my opinion, another quality of knowledge. In Tell el Dab’a several layers are applied on top of each other, forming

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**Fig. 2**  Plaster relief of a human foot (raw scan, scan with enhanced colours, cross-section with plaster layers) (F0037).

**Fig. 3**  Back of a plaster relief with imprints of incised lines (F1489).

**Fig. 4**  Plaster relief of a pole. Right: back with imprints of red preliminary drawings (F1503).
massive relief bodies. Their heights range from relatively low reliefs of 1–2 cm (see cross-sections in fig. 2) up to very high and heavy examples of around 6 cm. What appears to be easy is in reality a very sophisticated process: to choose the right amount and kind of temper for the lime plaster – the plaster itself can not be too heavy and it needs to have the exactly right plasticity to be workable; moreover, the craftsperson also needs to have an eye for shaping the sculpture. Traces of casts or similar auxiliary means have not been detected to date, so we have to assume that the craftsperson moulded the motifs freely. While anticipating the overall representation in the third dimension, the craftsperson must have had the ability to concentrate on its construction layer by layer. An unskilled person who concentrates exclusively on detail may easily lose the overall concept; only very experienced craftspeople are able to overcome this. Most probably this kind of awareness can be seen as his or her most sophisticated skill: an ability which needs to be incorporated by perpetual repetition, either by mimicking an experienced master in an apprenticeship or by experimenting for a long time with the material. Both ways result in an implicit or embodied knowledge form, incorporated by a long-lasting body-material entanglement. As a result the craftsperson does not necessarily have to think consciously about the application of plaster layers: his or her body has learned the procedure through uncountable repetitions.

To my knowledge, apart from Tell el Dab'a, plaster reliefs have been discovered so far only in the Aegean and there nearly exclusively on Crete with the main corpus at Knossos.\textsuperscript{37} There are some striking similarities, but also differences in how the craftspersons in Egypt and on Crete planned and executed stucco reliefs.

At Knossos we can often trace a very fine reddish plaster layer between the background plane and the sculptured relief itself.\textsuperscript{38} It is at present difficult to say if this layer is restricted to the area where the relief was applied. If this is the case, it might have had a similar function as the preliminary drawings in Tell el Dab’a, even though it was executed in a completely different way; here, more research is still required. Furthermore, comparable net-shape incisions as anchorages of the sculptured stucco can be identified at Knossos.\textsuperscript{39} The technique is not only used for a stronger attachment of the sculptured material to the background, but also occasionally between single layers of the relief body. This is observable on one of the famous stucco reliefs of the women from Pseira and on two fragments of female breasts from the “Blocked Corridor” in Knossos.\textsuperscript{40} In addition, the most sophisticated technique is common in the Knossos material, too: the composition of the massive sculptured body out of several layers of lime plaster.

Similarities in the manufacturing technique of both sites are not visible on the surface of the finished reliefs. For instance, a travelling craftsperson visiting Knossos or Tell el Dab'a and simply looking at the reliefs at the walls of the palace, would not have been able to reproduce it in exactly the same way. He or she could have been inspired by the motifs, by their tactile features, their colourful appearance or surface treatment, but the exact work-flow is hidden under its surface and hence not traceable. So, how were some of these techniques disseminated so widely between Crete and Egypt?

To evaluate these similarities, we have to further consider local bodies of knowledge. During this period, manipulating lime plaster is a technique widespread in the Eastern Mediterranean and therefore easily accessible. A craftsperson experienced in handling this material might be able to infer some of the production procedures of the reliefs just by looking at their surfaces and then using his or her creativity to experiment on it. But in this case some elements of the production sequence might differ. The difference between preliminary drawings in Tell el Dab’a and the reddish plaster layer in Knossos could be the result of such an experimental phase. They might have the same function, but their execution is completely different. We have to keep in mind the possibility that people hit on similar solutions easily while experimenting with material. If the advantages are very obvious and convenient, they independently become an invention in different regions – there is not always the need for a diffusionist explanation. This might be the case with the application of plaster layers with anchors out of net-shaped incisions or any kind of crossing lines: the technique is spatially and temporally widespread for the application of plaster layers, used for example up to the present day in Syria. A transfer across the Mediterranean has not necessarily taken place. But in any case the knowledge forms involved in this procedure are largely discursive; therefore a direct craft interaction is not essential.

\textsuperscript{37} Exceptions are two fragments depicting the hip of a more or less life-size woman from the Argolis (Kaiser 1976, 306, fig. 473; Rodenwaldt 1912, n. 152) and an example of a quite low relief of a decorative pattern on Thera. Outside Knossos, reliefs have been detected in Pseira, Gournia, Palaikastro, Kato Zakro, Hagia Triada, and Khania (for an overview, see Kaiser 1976, 299–304).
\textsuperscript{38} Kaiser 1976, 296.
\textsuperscript{39} Kaiser 1976, 296, fig. 464 on the right side.
\textsuperscript{40} Kaiser 1976, 296, fig. 451b.
As has been explained above, the application of the plaster layers for massive relief involves, to a large extent, implicit knowledge forms, inscribed in the bodily experience of the craftsperson by countless repetition; an aspect which calls for a direct form of craft-interaction between Egypt and the Aegean. Whether that necessarily means itinerant craftsmen is a question hard to answer. The differences in conducting preliminary drawings might argue against that thesis, and for a transfer of techniques and an incorporation of knowledge in a respectively local context. But such a discrepancy can also be regarded as due to an individual variation of the manufacturer. What is clear, however, is that the embodied knowledge involved in this production was available among the people of both regions. They either had access to the same group of craftspeople or the knowledge had already been distributed more widely via long lasting contacts and can be regarded as common transmediterranean knowledge.

**Conclusion**

During the last decades, the hypothesis of itinerant craftspeople dominated research on fresco paintings in the Middle East. The agency of travelling craftspeople in the Eastern Mediterranean and the Middle East is a very important aspect to explore, but the focus on a seemingly non-ambiguous identification of mostly “Minoan” craftspeople is problematic, not only because of the ethnic connotations of the term “Minoan” or “Canaanite”, but also because an obsession with itinerant craftspeople led to a marginalization of other approaches and perspectives on the phenomenon.

An attempt at identifying specific knowledge forms in the production sequence of relief paintings in the Eastern Mediterranean does not aim at identifying specific craftspeople, but tracing knowledge networks. Through the reconstruction of practices during the production procedure, we can identify different knowledge forms, thereby offering valuable clues about the intensity of interaction in the Eastern Mediterranean. While the appearance of discursive knowledge forms in different regions, identified in the anchoring of sculptured material in the background plane, do not necessarily involve a long-lasting direct contact, the distribution of embodied knowledge required for certain techniques, such as three-dimensional composition of a massive relief body, needs long-lasting contact and repetitive mimicking.

The comparison of complete work flows at the different sites, but also the knowledge involved in making use of the reliefs in the palace cultures of the Eastern Mediterranean will hopefully provide us with deeper insight into Cretan-Egyptian interrelations in the future. For exploring the complexity of an Eastern Mediterranean knowledge interaction or even the formation of transmediterranean knowledge, the relief paintings might indeed be a good example.

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41 See also Brysbaert 2008, esp. 188–89.
Constance von Rüden

Bibliography


Minoan Archaeology

The Pretense of Being Through Perception, Retention and Recollection*

Iro Mathioudaki

Minoan Archaeology has been at the centre of Aegean Studies from its beginning as a discipline. Several studies have focused on its use as a defining aspect of the Greek identity and its impact on the broader cultural spectrum of Mediterranean studies. In this paper the author would like to view Minoan Archaeology through the eyes of a specialized archaeologist, who is dealing with the field on a more practical level. Through studying Knossian pottery with experts the author realized how important it was to look at a site “from inside out” and thus gradually developed an informative system based on process, defined as a step-by-step procedure of analyzing archaeological data. Despite this multi-level approach the focus stays on pottery typology, accompanied by quantitative methods and statistics which take into consideration all the available data, primary as well as published material. When dealing with the latter, we should bear in mind that data from published material comes to us already filtered by someone else’s views and interpretations. Thus the study of primary data is especially important when trying to evaluate the material manifestations of a culture. In order to present her views on pottery studies, in particular, the author uses the project known as “Palace, Middle Minoan III” which was undertaken some years ago by Dr. Colin F. Macdonald, Professor Carl Knappett and the author, as a case study. The enterprise is accompanied by theoretical observations on deductive disciplines, such as phenomenology.

Introduction

“Names are, no doubt, but whimsical draughtsmen, giving us of people as well as of places sketches so little like the reality that we often experience a kind of stupor when we have before our eyes, in place of the imagined, the visible world (which, for that matter, is not the true world, our senses being little more endowed than our imagination with the art of portraiture, so little, indeed, that the final and approximately lifelike pictures which we manage to obtain of reality are at least as different from the visible world as that was from the imagined).”

Marcel Proust, In Search of Lost Time (1919)

The title refers to the characteristics of experience: perception, retention and recollection. Our experiences run parallel to our ideas for things, a process indicative of a-priori perspective. We expect to view Minoan Archaeology as a science that includes a-priori thinking or a-priori possibilities for explaining reality. To achieve this, one needs to see the intention behind the goal, since every conscious experience, like the classification of pottery, brings with it an intention, which should be clear from the beginning. Perception, retention and recollection should be considered intentional experiences (“an intention of something”) according to the Husserlian perspective; the way to clarify and perceive their intentional function is mainly through description. Our focus here remains with pottery classification and typology as practices. The archaeological data that we use belong to a certain spatio-temporal frame, Northern Crete, Knossos, of the MM III period.

Apart from the bulk of material evidence the author draws some ideas and thoughts from theories and analytic methodologies, like phenomenology, which, to a certain extent, have been applied to archaeology – not in a holistic way, though, since it is hard to work with theoretical ideas without archaeological case studies. The latter should in the end comprise theories in their own right. Another problem with the application of theoretical models in archaeology is the need for more general frames; they cannot be easily applied to very specific case studies, without attaining self-explanatory results. Thus, theoretical models borrowed from sociology or psychology tend to be in-

* Using the opportunity of the present paper I would like to express my deepest thanks to my mentors Colin Macdonald and Carl Knappett for the chance they offered me to work with them on this very interesting material.

1 Proust 1996, 141.
2 Husserl 1931; for an emphasis on intentionality, see Van Gulick 1996, 286.
3 Husserl 1931, 104; Loryart 1954, 61; Tilley 2008, 271.
4 See particularly Tilley 1994 for a pioneer application in Archaeology. See also Brück 2005, 45–6 and Gillings 2011, 53.
adequately perceived both by scientists and archaeologist experts, especially when it comes to generalizations and transference to another, a broader, scale of perception. In short, it is hard to integrate theories appropriated from other disciplines in ways that articulate closely to archaeological data.\(^5\)

**The Peculiarities of Minoan Archaeology**

Minoan Archaeology as a discipline shows some unique features compared to the rest of the Aegean, i.e. Mainland Greece and the Islands. It is more advanced, a fact better perceived through our unfamiliarity with the terms “Cycladic Archaeology” or “Mainland Archaeology” as opposed to our familiarity with Minoan Archaeology, which is considered as a discipline in its own right. Issues like terminology, typology and ceramic characterization are more or less fixed in the case of Minoan Archaeology. We cannot compare the terminological problems of the Mainland or Cycladic Middle and Late Bronze Age pottery with those of the synchronous Minoan periods.

Even when different names or typological methods are used, like, for example, the so-called ogival bowl, a name used by Hatzaki,\(^6\) which is in fact the lipless hemispherical bowl typical of the MM IIIIB period, treated elsewhere simply as a conical cup,\(^7\) there is a condescending silence about names and terms used differently by scholars throughout Crete. The same counts for the chronological attribution of ceramic assemblages and their characteristics. We have, for example, the case of MM IIIIB or MM IIIIB–LM IA transitional or LM IA early, all of them used for defining the same chronological horizon, as the work of Betancourt clearly demonstrates.\(^8\) The different use of chronological terms by various scholars is an accepted fact that does not impede progress. Adaptability is a virtue in this case. But, adaptability by itself comes along with some requirements, which need to be met: a solid background and abundance of material and case studies. Both of these are present in the case of Minoan Archaeology.

The work of Arthur Evans played a major role, since he established the terminology and typology of pottery to a large extent. It is not a coincidence that we still use his terms, such as tortoise-shell ripple pattern, featherwave style etc. We feel secure using those phrases; we speak the same language, Evans’ language. That could mean that multi-vocality holds up progress, at least as much as issues of methodology, i.e. classification, are concerned. Evans has been criticized for his evolutionary perspective in the way he interprets things;\(^9\) this is not obvious in ceramic typology. The stages of genesis, maturity and decline are not so clear-cut in pottery production; we witness, instead, a steady changing in forms, types and functions, which is evident in Evans’ work.\(^10\) The main chronological indicator and one of the most voluble agents of past production and consumption patterns, the pottery, is not indicative of an evolutionary perspective.

Another important aspect is the amount of Minoan pottery studied every year that does not compare with that of other synchronous Aegean sites. This is an aspect hard to conceive, if one is not involved in the study of pottery. Alonaki at Juktas, Karetsou’s excavation, yielded – apart from the whole pots mended and catalogued during the excavation – more than 300 crates of sherd material.\(^11\) The whole Alonaki assemblage derives from one building complex only. One can imagine what happens in the case of Knossos, Phaestos or other large Cretan sites.

**Our Case Study**

Our view and the way we present it to others define and gradually form the archaeological record in question. Knowledge should be conceived as a flow, as a process. While still at the beginning of our path, we produce papers or monographs that remain with us as time passes and gradually become solid evidence taking the place, in a way, of the material evidence. Just like context or catalogue sheets, taken as an example in the analysis of Yarrow, or digital photographs and their context categories examined by Tringham, the text – the written record – is transformed to artifact and meaning at the same time;\(^12\) it can be perceived either as a material object in its own right, as a materialized form of thinking, or as the vehicle for subjective meaning, depending on the point of view of the

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10. See particularly Evans 1921 and 1928.
12. Yarrow 2008, 121; Tringham 2010, 72 and fig. 3.
The value of texts, though, should be a matter of question, depending on the present stage of knowledge. The factor we should rely on indefinitely is the archaeological evidence. A re-evaluation of old data clears the picture and saves time for future generations.

In this regard, the study of primary data is important. This is what we chose to do in the project named “Palace of Minos Middle Minoan III” undertaken some years ago by Professor Carl Knappett, Dr. Colin Macdonald and the author.13 The idea, put forward more than a decade ago by Sinclair Hood, was to illuminate the shadowy MM III period by choosing relevant palatial contexts, analyzing them stratigraphically, focusing on their character as illustrated by the pottery finds.14 It was from the beginning an inside-out perspective, moving from the pots to the contextualized assemblage and finally – with the aim of architecture – to the re-composing of the MM III palace or building context. Assemblages comprising 15 sets from the north, south and east sector of the Palace selected according to chronological and architectural criteria were compared to each other in terms of their compositions and character.

The selection of specific deposits (contexts) as representative of chronological and ceramic phases is also encountered in the Knossos Pottery Handbook and used there as the main methodological tool.15 We could say that the palatial deposits treated in our study complement those represented in the Handbook, especially as far as the MM IIIA period is concerned.16 In the Handbook, the deposits come mainly from areas outside the palace. There is also a differentiation in the character of the pottery, since the palatial deposits contain mainly plain pottery, of both fine and crude version, like conical cups, bowls and saucers, while the deposits treated in the Handbook show a selection of the most characteristic fine wares of the period. In this way, our study gives a quite different perspective of the MM III period of Knossos, which is crucial when one recalls that in his definition of the period Evans had these deposits in mind. The MM IIIA period, in particular, is well recorded in the palatial material, since the destruction debris of the end of MM IIIB sealed several MM IIIA deposits from different areas of the palace, among which the most characteristic ones, like the South Polychrome Deposits (i.e. Houses of the Fallen Blocks and the Sacrificed Oxen). Evans’ methodology in chronology was to some degree based on the deposits created by this destruction.

The method of using old data – the Palace of Minos volumes, notebooks and daybooks of Evans and Mackenzie – was a sine qua non. We also had to go through the pottery – the primary data, which mainly formed our conclusions. Faced with the overwhelming qualitative and quantitative analysis of the pottery, we made some other choices during the process of study that influenced the final product, the presentation of the archaeological material in a book. First of all, specific deposits were selected which presuppose deep knowledge of the palatial contexts (i.e. Magazine of the Medallion Pithoi, Olive Press Room, Court of Stone Spout, Room of the Stone Pier, Room East of the School Room, North Entrance Passage, North-West Lustral Basin, Room of the Knobbed Pithos, Cists below Central Stairs, South Propylaeum). We chose the contexts according to our main goal, the definition of the MM III period; after this followed the singling out of specific pots or sherds for the catalogue and the selection of the most representative examples for the book’s catalogue. In this way what we see at the end is the result of choices filtered already three times through the view of the persons involved. Comments on pottery typology and quantification from different periods of occupation combined with architectural observations are used for the chronological attribution of deposits and broader palatial areas (i.e. East Wing, North Entrance Passage) to different periods and, at the end, for the investigation of the character of each area.

Pottery analysis played a major role in attributing deposits to periods. Pottery typology is accompanied by quantitative methods, percentages extracted by databases and presented in tables and diagrams with shapes and wares on one side and contexts on the other. The information reaches us directly in the form of tables; the point being to have the most important part of the assemblage in front of our eyes. What is also very important is the potential to inspect the pottery finds from the point of view of the context and the shapes/wares at the same time. Thorough quantitative analysis restores the balance between conscious and unconscious actions in constituting the archaeological record.

The material comes from deposits belonging to different dates, so shapes and wares are treated separately, when it comes to chronology. In order to compare deposits of the same chronological horizon, the data used differ among cases. The material includes pottery of MM IIIA and MM IIIB periods; through our study and basing ourselves
mainly on stratigraphical observations we decided to divide MM IIIA further, in MM IIIA early and late. What concerned us primarily was the presentation of deposits and shapes/wares chronologically in tables and diagrams. To illustrate the difference between MM IIIA and MM IIIB we used all available data, but in order to show the difference in types and percentages between MM IIIA early and late, the data came from specific deposits: Magazine of Medallion Pithoi, Olive Press Room and Room of Stone Pier box 1230 for early MM IIIA and 1st Blind Well, Room of Stone Pier box 1229 and Pit East of the School Room for late MM IIIA. Tables were made for all different aspects of pottery analysis, like technology and function.

Of particular interest is, of course, the relationship among parts of the tables, which represent the material. Percentages of types between different periods were found to be much more informative for dating than a classification based on type-fossils. Through this methodology, we came to several conclusions: that spatter decoration, observed on cups or saucers is characteristic of the early MM IIIA period; that broad conical cups with intense rilling at the interior do not continue in MM IIIB; that tall conical cups should be considered typical for early MM IIIA, since 167 examples (out of 180) were found in early MM IIIA deposits; that ribbed straight-sided cups are limited to early MM IIIA. Observations on decoration are also important, like the case of the so-called Spiral band Style that is placed early in MM III period, a fact that confirms previous attributions.

The vast majority of the pottery from the palatial deposits belongs to plain, undecorated types, which constitute ca. 70 % of the total. The percentage of plain wares is also interesting from a chronological point of view, since they proved to be more common as we move on from the early MM IIIA to the MM IIIB period.

**Complex Life-Histories and their Reflection in Memory**

It is obvious from our methodology that the output of our efforts, the written evidence, has its own life history, its own biography that can be – and should be – traced back in order to reveal the multi-stage procedure that brought it into life and criticize it in a proper fashion. It is a trend, based on Material Culture Studies and Thing Theory, to see inanimate things as alive, as having a soul of their own that interacts with human agents and conveys information. We witness this in the latest view of Houses as living bodies by Driessen and the emphasis on the biography of a House.

The role of material culture is being gradually restored by placing the material aspect above the social. Just like other inanimate things, pots, among other objects, whose social and material contexts shift over time and can be traced back and shown in biographical order, products of thoughts – books and papers, especially those that present material and add directly to the archaeological record – also have a biography in the way they are perceived and written, in their methodologies and goals. Their biography should be “written” – be recited as a step by step procedure by us, who act in this case as agents. Texts are then viewed as the material form of accumulated lived moments of different agencies.

The relationship between category learning and decision-making or choice allows us to categorize examples successfully. It would be interesting to trace the path in pottery classification and see how directly or indirectly perception works; to see the way links work during archaeological classification. When the archaeologist studies a new assemblage (from a different area, or a different context from the same area), which is out of context, he does not have a referent to rely on; he is at a “state of initial comparison”, once the initial comparison leads to the establishment of a referent the context is tested against other phenomena; phenomena act as referents in this case, and the classifier is biased towards similarity of the true types with his own phenomena. When the context is established, it becomes the referent and the classifier is biased towards dissimilarity. This phenomenological procedure, this model of perception analyzed and embellished by van der Leeuw, has to be considered as a habitual practice, as action embedded in the archaeologists’ mind over long periods of time through the process of repetition. Apart from the mental procedure described, pottery classification requires a practical know-how that is relevant and could offer a solid experimental ground to an extended mind hypothesis and a notion of embodied perception, taking into consideration that the process through which archaeologists “make sense of their findings and are faced with the task of classifying them are central to the cognitive life of things”.

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17 Knappett et al. 2013, 11.
18 Betancourt 1985, 97.
19 Cf. Kopytoff 1986 and Brown 2001, respectively.
20 Driessen 2010, 40.
21 Knappett 2010, 81.
22 van der Leeuw 1984, 726.
After so much work on typology, after the adoption of a clear typological scheme in Minoan pottery studies, we are not in a position to see things altogether at the same time, to have an instant overview of the whole. Everything is separated and catalogued as a certain thing and this draws us apart from a pure phenomenological perspective; in other words, we always view someone else’s views. A phenomenological perspective has to do with a systematic approach of the cognitive function, since it relies on the description of phenomena as they are given to consciousness. Every one of us has his own experiences as far as typology is concerned, his own typological phenomena, while the true types – the original ones – stand aside, independent from the subjects of our own experiences. In order to clarify things we need to reveal, in a systematic manner, the intention of the classifier and the fulfillment of that intention, his motive, the nature of the material, the recording procedure and the limitations of the study. It is hard to detect our own contribution in the way we catalogue pottery and form our typologies. We need, though, to rely on a praeципium individuationis.

We could come to our own perspective (a) through the method of reduction, through a gradual process of eliminating foreign elements. What remains is a cohesive layer of our own phenomena. Another way (b) for estimating our own contribution is that of memory, i.e. autobiographical memory, through which we can recreate the flow of our experiences, to detect the starting point, when we first started to single out and categorize objects, and the way we are moving afterwards in a multi-stage procedure. Archaeology with its focus on material culture and its reflection on time provides important perspectives on memory processes. Acquisition, storage and retrieval are parts of the dynamics of information-processing as expressed through memory, interestingly, they coincide with the characteristics of experience; perception, retention and recollection. The notion of “sensory and bodily memory” has been emphasized by many archaeologists, among others and as far as Aegean Archaeology is concerned by Hamilakis as a device for identity formation; in this aspect, objects act as agents of recollection or oblivion through their participation in ceremonies.

In our case, we are interested in our own role as agents, especially in the relation between concepts, memory and meaning and their role in the formation of the archaeological record. We concentrate on archaeology as a memory practice in and of itself drawing upon the work of Borić, Cipolla and Tringham. Cipolla examines theories of memory in terms of intentional and unintentional practices of everyday life comparing memory to a storehouse. Memory is recognized as similar to the interpretive practice of reading; just like text acts independently of the author’s original intention and lives its own life, memory is an ongoing “montage of scraps and fragments of meaning”. The same can be claimed for photographs and other digital archives, like videos, drawings etc., taken as examples in the work of Tringham; those are the means through which an archaeological project is remembered and can be presented as a step-by-step procedure through recollection. In this way the past becomes an integral part of the process of people making their own history, the history of an archaeological site or, in our case, the history of a book or a project. With the concept of social memory archaeologists realize their own role as memory-makers in the modern world.

Epilogue

Starting with our own world, our own sense of the Minoan Archaeology, and the people within it, we can investigate its a-priori nature in a purely supervisory way. Then we could use this a-priori perspective as a starting point for a systematic investigation of the structure of past societies. Interpretive methods of the past should not be taken for granted, but need to be re-established under the present state of knowledge.

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24 Husserl 1931, 117.
25 See Malafouris 2008, 28 for the difference between prior intention and intention in action.
26 Hamilakis 2010, 193.
29 Borić 2003; Cipolla 2008; Tringham 2010.
30 Cipolla 2008, 197.
31 Borić 2003, 49.
32 In the sense presented in Rubin, Schrauf and Greenberg 2003, 887.
33 Tringham 2010, 70.
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Closing Remarks
By any standards this has been a most interesting and successful conference. Our hope is that it will have future impact. We happily begin with our collective and warmest congratulations and thanks to Diamantis (Panagiotopoulos) and all his team, Sarah (Cappel), Ute (Günkel-Maschek), Torben (Kessler), Yasemin (Leylek), Noach (Vander Beken) and Eva (Wacha). One reason for the success is the careful thought which went into the intellectual planning and so the intellectual structure of the Conference. What do we have had?

Six keynote lectures, two “Evening Lectures” and 32 papers formulating current and future research in the Cretan ‘Bronze Age’. We are all aware of the heterarchy versus hierarchy debate. So I am pleased to note the very careful and correct attention to hierarchy: front-line, cutting-edge research presented by the younger generation, the ‘Keynotes’ and ‘Evenings’ by the middle, I almost said middle-aged generation (and we note with interest that Yannis Hamilakis is now numbered among the middle-aged generation), while this plenary Round Table is chaired by, well, an oldie. Yes, we can have an upright pyramid, rising to its highest (literal and metaphorical) point, but of course by strict stratigraphy the oldest is usually at the bottom, the youngest, newest and often most informative is at the top of the pyramid, if it is inverted.

The intellectual planning of the conference means that the approach to the subject may be defined as conceptual. To formulate the underlying concepts it may be suggested that the Sessions have covered the following: (1) the historiography of Minoan archaeology – I shall come to “Minoan” later on – η ιστοριογραφία; (2) new field research on settlement sites, mortuary sites, landscapes (here we must pay tribute to the amazing number of intensive site and regional surveys conducted in Crete, in considerable contrast to other areas of the Aegean and east Mediterranean) – η τοπογραφία; (3) the use of architectural space – η αρχιτεκτονική; (4) social structure, including gender – η κοινωνική; (5) corporeality, especially dead corporeality, one is tempted to say corpsoreality, anyway – η σωματική; (6) some papers link social structure and corporeality through their treatment of the concepts of performativity – επιτελεστικότητα – and materiality – υλικότητα; finally (7) the Minoans and Others, we may say η μινωϊκή και ετερότητα.

So, we have an exceptionally wide range of themes, topics and concepts, presented from a variety of perspectives. Speakers were of course free to choose their topic. It is therefore significant that the major outcome of these individual free choices has been the emphasis on the people of Bronze Age Crete, from individuals, including likely masterminds, to social groups of nuclear family, household, community and regional populations. Now the Round Table discussion needs some shape. The formulation of seven conceptual themes, largely but not wholly mirroring the Sessions, could therefore be discussed as such, though of course there is much overlapping and interlocking, and others can be added as anyone wishes.

Now it is not for me to formulate future Bronze Age research of Cretologists younger than I – you are doing and will do that for yourselves. But I hope you will permit a few more general though inevitably personal observations on the formulation of that future. Diamantis (Panagiotopoulos) has indeed already fruitfully introduced this future in his preliminary remarks today and on our opening evening.

First two related preliminary points. One is that, while research projects must be planned as the investigation of well defined research questions, research will in fact frequently be determined not at all by research planning but by the purely chance factor of discoveries arising through building work, agricultural work or looting (αρχαιοκαλλιέργεια). Often our best advances in knowledge come in this entirely unplanned way, but such new evidence must be integrated into the broader picture. Second, we have in Crete one enormous advantage over many researchers elsewhere. This I call the power of the unexpected, δύναμη του απροσδόκητου. What I mean is the seeming inexhaustibility of the Megalonesos in delivering, within both planned and unplanned work, completely unforeseen objects of astonishing beauty, interest and importance for Bronze Age studies every single year, and indeed sites as well as objects. We can all think of lots of examples, and I cite at random the Khania Master Impression, the Palaikastro kouros, the Syme gold ring (I wanted Angelike Lembesi to make the athlete on the ring the symbol of the Athens Olympics – when that man crossed the finishing line Usain Bolt would hardly have started), and most recently the Mochlos ivory pyxis; and of unexpected sites the Arkhanes Phourni cemetery, Zominthos, the Galatas palace and now the Chryssi settlement packed full of murex and triton shells. Such is the importance of these finds.
that we have to guard against the power of Circe or Kalypso to distract attention from the main research aims of investigators. But our Cretan researchers are good at both enjoying their treasures and not being too distracted from the main objects.

Now these main objects bring me to my main observation. What are we about? I have been very interested to find that what is for me the main purpose has been largely absent from the conference. The meeting has strongly focused, as noted, on concepts of people, in their living and dead situations, somatic, sensory, social. Is there anything else? For me the main purpose has been and remains entirely clear. This is the recovery and understanding of Cretan Bronze Age history, not culture-history, on which James Whitley has recently poured scorn, but total history, Gesamtgeschichte. So as well as locating our research within the framework of social science we should also pursue it as a historical science. The overall historical approach very much implies attention to the highly stimulating task of explaining change as much as to the appreciation and analysis of periodic stability, for example what steps or stages brought people to erect monumental buildings, to create writing systems or to introduce human figures (human or divine!) into wall paintings. Total history is composed of a myriad micro-histories, for example the history of iconography, of agriculture, of technology (with so many Minoan crafts of the highest quality), of exchange, of religious belief and ritual, etc. These may and, given their scope, may often have to be studied in their own terms, but then always built into the recovery of the total history.

For this surely the approach should as far as possible be emic rather than etic, that is we aim to recover and understand the intentions of the (original) makers and users of things, as individuals (agency theory) or collectively. In the absence of fully deciphered written texts this is no easy task, but the Linear A economic records and the presumably religious inscriptive records (on libation tables), as well as the rich iconography and the analysis of landscapes through surveys together allow considerable progress in the recovery of original Minoan intentions. But if we agree that emic is the essential aim and we agree that models or theories are needed to explain change or stability we are at once faced with a large conundrum, since models and theories are almost by definition etic. Several papers, for example in discussion of the vitality of materiality, have offered almost wholly modern (i.e. etic) constructs. But we do need to try towards the understanding of original (Minoan) intentions. For this, besides the Minoan specifics mentioned above, several generalities may help, for example concepts of universality (as in gesture), the somatic approach so fruitfully discussed, and the building up of materiality from the bottom, from the details of individual contexts.

If then we are interested in sequence and within it the explanation of change we still need a model. With apologies to those who have heard me remark on it before I continue to think that, notwithstanding some criticism, the basic Braudelian model is much the best, in particular because we may use it to evaluate not just the different but contemporaneously operating scales of activity (long-, medium- and short-term), but the linkages between them. This adds not simply to the descriptive but to the explanatory power of the model. Here are a few examples. Some think that the evolutionary approach should be rejected and that everything should be evaluated simply in its own (non-temporal or non-sequential) terms. But the Braudelian model allows both evolutionary and non-evolutionary applications, through the model’s different scales. Evolution in the longer term is surely undeniable and is also traceable in medium-term economic and political developments over a few centuries, for example from ‘prepalatial’ to ‘palatial’. Second the power of memory, fruitfully discussed by Yannis Hamilakis at this meeting and by Maria Relaki elsewhere, is (pace Hamilakis) deeply evolutionary, since collective memory accumulates and becomes embedded over the longer and medium term and can play vital societal roles in the short term, for instance as ‘received wisdom’ pertinent to or governing particular events and ceremonies. Third, a rather different example of the model. The Theran eruption was at one scale very much a historical event, begun and ended within a couple of days and bringing to an immediate end the life of a highly active and flourishing community; it was also a medium-term factor, moyenne durée, in that it also brought to an end a community, its traditions and practices which had been flourishing for a thousand years, since Early Bronze II; but thirdly, in geological time, longue durée, the eruption was just one of many in the span of volcanological history, a normal, albeit chronologically irregular geological action. Erupions happen and can, in the long term, deliver the fundamental resource of fertile terrain. The three scales are linked in a single event; the causation is approximately the same volcanologically and the effects are both medium- and short-term. The long-term plays into the short-term through resource generation. Similarly earthquakes, more relevant to Crete, are a repeated, long-term geological phenomenon, are repeated medium-term events effecting building techniques and doubtless religious beliefs, and are short-term events causing immediate devastation. They explain events (destructions) in the short term and have some explanatory role for medium-term material choices and beliefs.

My second observation is briefer. It is history understood as the constant interplay between two opposing forces. One of the two is something which those of us guilty of a certain degree of κρητολατρεία for the θεοβάσιστον
χώμα are always excited by. Though we may concentrate our interest in one period, say the so-called Bronze Age, we view Cretan history as a continuum, not at all as a matter of discrete periods. There is a vast range of long-term, medium-term and short-term continuities and memories – we recall again Yannis Hamilakis’s discussion of emplaced memories and we remember the myriad επιβιώσεις και αναβιώσεις of Cretan artistic life, as Angeliki Lembesi once called them. Those of us who have had the privilege of excavating in Crete have all experienced the moment when a tool is unearthed, unseen for 3500 years, and the workman tells you what it is for and how it is used today. Again, how a wild plant is used today by Katerina Vardhaki of Dionysi, a small village in the northern foothills of the Asterousia overlooking the Mesara, is of equal interest to how the same plant was used in the 2nd millennium B.C. in the same area.

At the same time we have the second of our opposing forces. Whatever else life was and is about in the Mediterranean it was and is always about movement, by sea and by land, of individuals and of groups. The point was fundamental both to Braudelian and to Hordenian and Purcellian exegesis. Appreciation of this is fundamental to explanation of change in our area. Someone is always on the move, bringing ideas, goods or themselves as new residents to an area, whether best described under the heading of purely social interaction or of exchange or trade or of migration or of colonialisation. This can often be the best explanation of change. It is appropriate to notice that three of the most important changes ever to affect ancient Crete involve movement into the island: one, though the point is healthily disputed, is the arrival of new groups from the Dodecanesian, south Anatolian and probably west Anatolian areas in the period we call Final Neolithic and Early Minoan I, a convincing position put forward by Krzysztof Nowicki on the basis of much fieldwork; the second has been the remarkable discovery by Peter Day and Peter Tomkins that at least some of the earliest Neolithic pottery of Knossos was not local and was indeed in part off-island, implying otherwise unknown Early Neolithic settlements in Crete and networks of exchange, including off-island ones; the third is the even more astonishing discovery of Lower Palaeolithic, that is of arrivals by sea, presumably the two hundred miles from north Africa (Libya of all places), several hundred thousand years ago. And who were these people? Apparently Homo heidelbergensis!

For my third and final introductory observation I will try to be more controversial. In a word let us dismiss worries about use of the terms Minoan and the Minoans. Of course if we use the term Minoan to mean simply “the people living in Crete in the later 4th, 3rd and 2nd millennia B.C.” – quite a mouthful – we can and should investigate the applicability of a single label for those people over that time span. But even while we demonstrate chronological and regional variation at specific levels of enquiry I think a general label is valid. This is because, to venture into materiality, that is into the production and modes of use of the products, a strong case can be made for Minoan as way of behaving. Cyprian Broodbank has remarked similarly. Slightly to paraphrase Gerald Cadogan some years ago: Minoan “villas” are all different, but you always know a Minoan “villa” when you see one. And to the material I would add the spiritual, evidenced above all in the island-wide repetition of iconography. The point is of course particularly relevant to the Minoans and the Other, η ετερότητα. We have seen, for example, how thoroughly Minoan (indeed Knossian) was the decoration of two early New Kingdom palaces at Avaris (Tell el-Dab’a) within the architectural frame of the Other, Egyptian in this case.

It is in any case completely absurd to argue for the abolition of the term Minoan, as one or two colleagues have recently done. The name and the term have for example become deeply embedded in the modern literary world, in many languages but chiefly in Greek and English. Evans had explained in the introductory chapter of Volume I of The Palace of Minos (1921) why he applied the name to the civilization he and others had revealed (revealed, not produced) and then interpreted. (We note too that he here explicitly acknowledges Hecck’s earlier use of the name Minoan, though until Evans there was almost no Bronze Age material culture to apply it to). Again, if you are interested in writing critiques of racism, colonialism, or its opposite, nationalism (sometimes in the same paper), or, even worse, capitalism, and you are trying to associate Evans with such contexts, that (even if it were a well founded charge, which it is not) has no necessary bearing on the use or concept of Minoan or Minoans. Well, I am trying to provoke discussion, so will end there. This just happens to bring us to the first of our Sessions and concepts for discussion, η ιστοριογραφική.
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The content

More than 100 years ago, Sir Arthur Evans’ spade made the first cut into the earth above the now well-known Palace at Knossos. His research at the Kephala hill as well as contemporary fieldwork at further sites on Crete saw the birth of a new discipline: Minoan Archaeology. Since these beginnings in the first decades of the 20th century, the investigation of Bronze Age Crete has experienced fundamental progress. The impressive wealth of new data relating to the sites and material culture of this Bronze Age society and its impact beyond the island’s shores, the refinement of its chronology, the constant development of hermeneutical approaches to social, religious or political issues, and new methods and instruments employed for the exploration and conservation of the archaeological remains have shaped the dynamic trajectory of this discipline for more than a century.

In March 2011 – exactly 111 years after the beginning of Evans’ work at Knossos – a conference on Minoan Archaeology took place at Heidelberg with the aim to outline current trends and prospects of this scientific field, by setting up an open dialogue between renowned scholars and the young generation of researchers. The present volume brings together most of the papers presented during the conference. They are subsumed under six chapters highlighting current key issues in the study of Bronze Age Crete with a pronounced focus on the broad subject of society.

The editors

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The series AEGIS (Aegean Interdisciplinary Studies) attempts to make the results of new archaeological research on Aegean and especially Minoan societies available to the scientific and wider public at a rapid pace. Monographs, PhD dissertations, proceedings of scientific meetings and excavation reports complete each other to offer a general view of this time frame which is of primary importance to understand the ancient world and its historical, political, symbolical and social sequences.