

Breaking Boundaries – Connecting the Aegean Bronze Age

*Proceedings of the 3rd Scapecon Conference,
hosted online at
the Groningen Institute for Archaeology
on 22 and 29 September
and 6 October 2020*

We would like to thank our sponsors:

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TMA Supplement 2 (2021)

Breaking Boundaries – Connecting the Aegean Bronze Age. Proceedings of the 3rd Scapecon Conference, hosted online at the Groningen Institute for Archaeology on 22 and 29 September and 6 October 2020
Price: €15,-

Tijdschrift voor Mediterrane Archeologie (TMA) is an independent journal that publishes on current archaeological research on the Mediterranean world, carried out by scholars at Dutch and Belgian universities and by Dutch-speaking scholars abroad. TMA works with single blind peer review. TMA Supplement 2 was reviewed by the Scapecon editorial board and the TMA editorial board.

Subscriptions:

TMA is published twice per year. You can subscribe per mail (address below) and via our website. A subscription costs €20,- (€15,- for students). Subscriptions run from 1 January until 31 December and are automatically renewed, unless cancelled in writing a month before the new year. TMA Supplements are published irregularly and are not part of a subscription on the journal.

Address:

Tijdschrift voor Mediterrane Archeologie
Poststraat 6
9712 ER Groningen, The Netherlands

Bank details:

Stichting ter Ondersteuning Oudheidkundig Onderzoek
IBAN: NL14INGB0005859344
BIC: INGBNL2A
KvK: 41014777

TMA online:

- tijdschrift@mediterrane-archeologie.nl
- mediterrane-archeologie.nl
- rug.academia.edu/TMATijdschriftvoorMediterraneArcheologie
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TMA is created in collaboration with Barkhuis Publishing, Eelde

ISSN 0922-3312
81999/S000

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Breaking Boundaries

Connecting Aegean Bronze Age scholars in times of a global pandemic

It is with great pride that we present you the volume before you: *TMA Supplement 2: Breaking Boundaries – Connecting the Aegean Bronze Age*. This second supplement in the history of *Tijdschrift voor Mediterraene Archeologie* (TMA) is the result of the combined efforts of the TMA editorial team and the Scapecon 2020 conference organisers.

Scapecon 2020 & TMA

The international conference Scapecon 2020 was originally set to take place in Groningen in March 2020. Since 2018, this event has been organised annually in early spring to connect early career scholars of the Aegean Bronze Age. Previous editions at Heidelberg (Germany) and Poznan (Poland) were a great success, allowing young researchers to share and discuss their research and socialise with their peers from all over the world.

The edition in 2020 did not go quite as planned. Less than two weeks before the three-day event was supposed to kick-off, the Netherlands went into lockdown because of the COVID-19 pandemic, eliminating any hope to host the event as planned. At first we postponed the event, in the hope to come together in Groningen at a later date. However, as uncertainties continued, we were facing the choice between either cancelling the event completely or switching to a different format. Having over 20 enthusiastic speakers lined up from Austria, Belgium, Germany, Greece, Italy, the Netherlands, Poland, Turkey, the United Kingdom, and the United States of America, we decided to go online.

In three afternoon sessions in September (22nd and 29th) and October (6th), Scapecon 2020 Online: *Breaking Boundaries: Negotiating change in the Aegean Bronze Age* took place (see pp. ix-x for the complete programme). Its success was much bigger than we could have imagined: over a hundred people from all over the world signed up and enjoyed interesting papers and lively discussions. Going online proved easily accessible, and while we definitely missed the network aspects of an in-person event, we were happy and grateful so many people signed in and decided to join us.

We did not want our initiative to stop with the online conference. After discussing ways in which we could further support the early career scholars of our event, we decided to get a selection of papers ready for publication. Reaching out to the TMA-team to combine our efforts seemed a very natural step. The Groningen-based *Tijdschrift voor Mediterraene Archeologie* (TMA) was founded in 1988 with the goal to offer early career researchers of Mediterranean archaeology a podium next to senior academics. TMA is the only Dutch-language scientific journal on mediterranean archaeology and as such, it is primarily aimed at scholars affiliat-

ed to Belgian or Dutch universities and at Dutch-speaking scholars abroad. Over the years, however, TMA has organised several English-language conferences following its themed issues. Due to the covid restrictions, such a conference was not an option for 2020. Working together with the organisers of Scapecon 2020 on a supplement offered a beautiful alternative to those conferences.

With the combined efforts of the TMA's editorial team, the enthusiastic Scapecon participants, the Dutch Aegean Prehistory academic community and the generous input from our financial supporters we are proud to now present you this volume with nine selected papers from the congress and twelve research profiles from Dutch researchers. Because TMA Supplements are not part of a subscription on the journal and because the supplement is in English, rather than primarily in Dutch, we decided to make the supplement freely accessible online.

About the theme: connecting the Aegean Bronze Age

The overarching theme of the Scapecon conferences has traditionally been 'relational archaeology of the Aegean Bronze Age'. This decidedly wide topic allows approaches from many different angles, including (but not limited to) people's relationships with each other, with the landscape, objects or architecture.

In 2020, the focus of the conference was on the flexibility of these relationships. Relationships of people and their material and immaterial worlds are not static; they are subject to continuous adaptation, renegotiation and manipulation, depending on the changing wants and needs of the agents shaping these relationships. This becomes visible in many aspects of the archaeological record, from object-oriented studies on subtle changes in iconography (Binnberg, Wolf) to more visible changes in shape and function of objects (such as pottery and metal) and the spread of these objects over the Mediterranean world (Mercogliano, Frank, Pendlebury). Then there is the impact of the environment (Borowka & Angeli, Emra & Cveček), and the use and (re)-structuring of the landscape (Katevaini, Rousioti). The articles in the volume are roughly ordered according to these different perspectives on relational archaeology.

As the articles cover not only a broad span of topics, but also a vast area and period, with different chronologies and terms for different regions, we created two figures to aid the reader. Figure 1 provides an overview of the most commonly encountered chronologies of the Bronze Age in this volume, i.e. those of Crete and the mainland. Figure 2 provides an overview of most sites and regions discussed in the various contributions.

Years BC		Crete (Minoan)		Mainland (Helladic)			
		Pottery Phase	Calendar dates	Pottery Phase	Calendar dates		
3100	Prepalatial	EM I	3100 – 2700 BC	EH I	3100 – 2700 BC		
3000							
2900							
2800							
2700							
2600		EM II	2700 – 2200 BC	EH II	2700 – 2200 BC		
2500							
2400							
2300							
2200							
2100	EM III	2200 – 2100 BC	EH III	2200 – 2000 BC			
2000	MM IA	2100 – 1900 BC	MH I	2000 – 1850 BC			
1900	Protopalatial	MM IB			1900 – 1800 BC		
1800		MM II	1800 – 1700 BC	MH II	1850 – 1700 BC		
1700							MM III
1600	Neopalatial	LM IA	1600 – 1480 BC	LH I	1600 – 1500 BC	Shaft-Grave era	
1500				LM IB	1480 – 1425 BC		LH IIA
1400						Final Palatial	
	Postpalatial	LM IIIA1	1390 – 1370 BC	LH IIIA1	1390 – 1370 BC		Mycenaean period
		LM IIIA2	1370 – 1300 BC	LH IIIA2	1370 – 1300 BC		
1300		LM IIIB	1300 – 1190 BC	LH IIIB	1300 – 1190 BC		
1200		LM IIIC	1190 – 1070 BC	LH IIIC	1190 – 1070 BC		
1100							
1070		Subminoan		Submycenaean			

Figure 1. An overview of the most commonly encountered chronologies of the Bronze Age in this volume, i.e. those of Crete and the mainland (figure Iris Rom).

About the contributions

The volume opens with a contribution by *Julia Binnberg*, who discusses the Late Minoan equivalent of the rabbit-duck-illusion, which is found on a clay sarcophagus (*larnax*) from Crete. She shows that readers of the image can recognise both waterbirds and argonauts in the decoration on the *larnax*, and she offers an answer to the question why such an ambiguous design was chosen for a sarcophagus.

For the article of *Diana Wolf* we remain in Crete, in the Late Minoan II-III period. She discusses four iconographic objects (figure-of-eight shields, impaled triangles, plant devices, and double axes) found on hard-stone seals. These objects were held by or engaging with figures in designs from the Neopalatial period, but seem to be ‘floating’ in seals from the Final Palatial period. Wolf proposes that this subtle change may have been adopted as a social strategy to negotiate a claim to power.

Moving from iconography to networks of trade, we continue with two studies on pottery assemblages in the northeastern Peloponnese. *Assunta Mercogliano* presents preliminary insights on a recently discovered Middle Helladic settlement near Trapeza Hill (see figure 2, no. 19). Mercogliano argues that the continuous use of certain pottery shapes in the settlement can be understood as a con-

sequence of the settlement’s location. Innovation may have presented itself in more peripheral sites differently.

From the Middle Helladic period we move to the Late Helladic period, with a paper by *Daniel Frank*. Using Neutron Activation Analysis (NAA), Frank shows that scientific analysis can go beyond certain limitations of macroscopic analyses. With this, Frank presents a fascinating case of potters from Kolonna (see figure 2, no. 12) continuing to supply a site very close to the rising Mycenaean centres in the Argolid for far longer than would be expected.

Next is a contribution by *Abby Pendlebury* (previously *Durick*), who discusses the (limited) evidence of Mycenaean objects from modern Bulgaria (see figure 2, nos. 31-34). She presents an exciting example of how absence of evidence (largely due to events in recent Bulgarian history, including the destruction of archaeological sites) should not be interpreted as evidence of absence.

For the next two papers we move from objects to seasonal changes, and their influence on the development of trade networks and ways of living. First, *Dawid Borowka & Effimia Angeli* draw their readers’ attention to the importance of maritime knowledge and navigational techniques. They do so in the context of the Minoan Thalassocracy (ca. 2000-1400 BC). The approximate starting date of the thal-

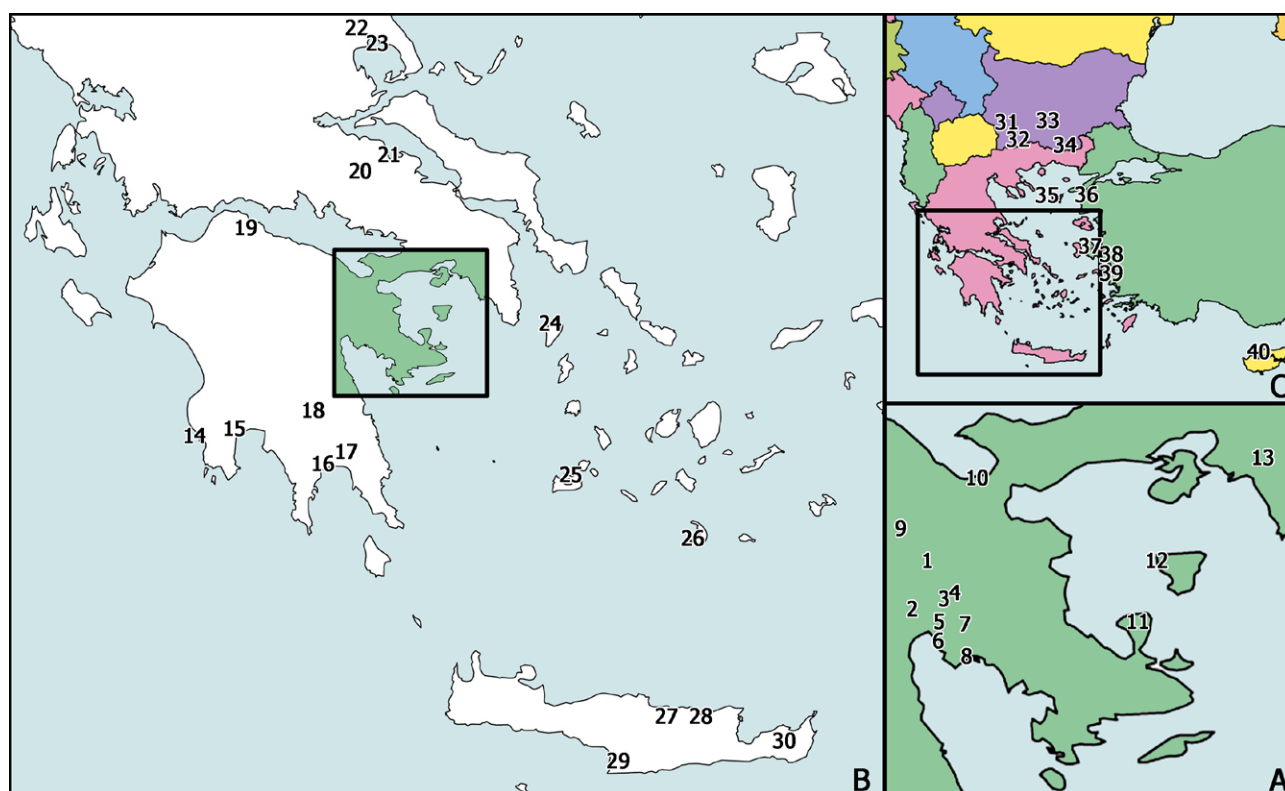


Figure 2. Map with important sites mentioned in the papers of this volume (figure Iris Rom and free vector maps by Vemaps.com).

A: Greece – Argolid and Saronic Gulf

1. Mycenae
2. Argos
3. Dendra
4. Midea
5. Tiryns
6. Lerna
7. Katsingri
8. Asine
9. Tsoungiza
10. Korakou
11. Methana peninsula
12. Kolonna (on Aegina)
13. Athens

B: Greece – southern mainland, Cyclades and Crete

14. Pylos
15. Nichoria
16. Ayios Stephanos
17. Geraki
18. Ayios Vasileios
19. Trapeza
20. Agia Triada
21. Mitrou
22. Dimini
23. Pefkakia
24. Agia Irini (on Keos)
25. Phylakopi (on Melos)
26. Akrotiri (on Thera/Santorini)
27. Knossos (on Crete)
28. Malia (on Crete)
29. Phaistos (on Crete)
30. Praisos (on Crete)

C: Wider Aegean

31. Bresto
32. Koprivlen
33. Dragoyna
34. Ada Tepe
35. Poliochni (on Lemnos)
36. Troy
37. Liman Tepe
38. Bakla Tepe
39. Çukuriçi Höyük
40. Agia Triada (on Cyprus)

assocracy corresponds to the first depictions of sails on Crete – something they may have learned from trading with Egypt, where the earliest depictions of sails are at least a millennium older.

The study by Sabina Cveček & Stephanie Emra also discusses seasonal changes, but in a very different context. Late Bronze Age zooarchaeological evidence from Çukuriçi

Höyük (see figure 2, no. 39) suggests, as the authors argue, that most domestic young animals were slaughtered before the beginning of the winter, rather than being kept until older age to increase wealth. Combining this with anthropological studies on the Baruya (a tribe in Papua New Guinea), Cveček & Emra propose inferences about the social structure of the settlement's inhabitants.

The final two papers discuss examples of inhabitants actively giving meaning to and shaping the landscape around them. *Alexandra Katevaini* combines modern elevation data with old maps and excavation reports (over a century old) to test the possibility of using these data in contextual analyses. Late Minoan tombs on Praisos (see figure 2, no. 30) constitute the case study for her test.

Finally, *Dimitra Rousioti* presents an overview of results from her recently published PhD thesis on the formation of the religious landscape in the Late Bronze Age Greek mainland and on Cycladic islands. Evidence for Mycenaean sanctuaries is scarce, but by bringing together what evidence there is for a larger region, Rousioti is able to provide a comparative analysis, showing regional differentiation in Mycenaean cultic practices.

The volume is complemented with introductions to research projects of both junior scholars and senior staff working on the Aegean Bronze Age in The Netherlands.

The final pages of this supplement offer Dutch translations of the abstracts of all nine articles.

Thanks

We wish to thank several people in aiding us in getting this publication ready for print, especially our keynote speakers

at the conference, Prof. Dr. Ann Brysbaert (University of Leiden) and Prof. Dr. Sofia Voutsaki (University of Groningen). We would also like to thank our sponsors, National Research School for archaeology ARCHON, the Netherlands Institute in Athens (NIA), the Society for the Promotion of Hellenic Studies (SPHS), and the Groninger Universiteitsfonds (GUF), for their generous support in publishing this volume in an open access format, as well as in print. You can find their logos on p. ii. We thank our Scapecon colleagues for reviewing all papers in this volume, and our TMA colleagues for aiding them and for dotting the i's. Our thanks also go to Adam Woznura, Daniel Turner and Ineke de Vries for their corrections of the English papers. Finally, we would like to thank Hannie Steegstra, for the amazing job of getting this volume ready for print.

We hope you enjoy this supplement!

On behalf of the Scapecon organisers and on behalf of the TMA editorial board,

Iris Rom & Caroline van Toor



Breaking boundaries: negotiating change in the Aegean Bronze Age

Conference programme

Tuesday 22 September 2020: Session I

Moderator: Daniel Turner, PhD

Session I: Human relations with their lived space

Keynote lecture 1: Prof. Ann Brysbaert (Leiden University)
*A 'moving' story about labour. The taskscape of the Late
Bronze Age Argive Plain*

Stephanie Emra (University of Veterinary Medicine, Vienna)
& Sabina Cveček (University of Vienna)
*Negotiation and interaction in EBA Çukuriçi Höyük: differing
solutions to competing 'scapes' with the beginning of rising
inequality*

Başak Ongar (University of Ege)
*Household archaeology in West Anatolia during the Late
Bronze Age*

Piotr Zeman (Adam Mickiewicz University)
*Entangled Mycenae: case study of a Late Bronze Age palatial
town*

Sarah Hilker (University of North Carolina at Chapel Hill)
Beyond the palace: case studies in Mycenaean townscapes

Francesca Nani (University of Pisa), Salvatore Vitale
(University of Pisa), Calla McNamee (Wiener Laboratory for
Archaeological Sciences)
*Building identities: breaks and continuity in construction prac-
tices at the prehistoric settlement of the 'Serraglio' on Kos*

Dawid Borowka (University of Gdańsk) & Effimia Angeli
(Democritus University of Thrace)
*Environmental aspects of the the so-called 'Minoisation' pro-
cess in the Middle and Late Bronze Age Aegean*

POSTER: Dimitra Spiliopoulou
*Life with the help of artificial light sources in the prehistoric
settlement of Akrotiri, Thira*

Tuesday 29th September 2020: Session II

Moderator: Iris Rom, MA

Session II: Human relations with sacred and mortuary space

Keynote lecture 2: Prof. Sofia Voutsaki (University of
Groningen)
Towards an archaeology of kinship

Alexandra Katevaina (University of Groningen)
Contextualizing Late Minoan tombs

Yannick de Raaff (university of Groningen)
*Experimenting with change: the built tomb of the North
Cemetery at Ayios Vasileios, Lakonia*

Dimitra Rousioti (Aristotle University of Thessaloniki)
*Investigating the sacred landscape in the Late Bronze Age
Greek mainland*

Iris Rom (University of Groningen)
Negotiating death in the Bronze Age: a view from western Greece

Katarzyna Dudlik (Adam Mickiewicz University)
Mortuary practices in context. Local idiosyncrasies in search of the Koan identity

POSTER: Youp van den Beld
Understanding socio-political processes through the study of labour investment: the case study of the North Cemetery at Ayios Vasilios

Daniel Frank (Ruprecht Karl University of Heidelberg)
Tracing Early Mycenaean ceramic traditions in the north-east Peloponnese

POSTER: Kilian Regnier
Building interactions beyond boundaries during the Bronze Age: the case of the Aegean tripod stone mortar

POSTER: Todor Valchev
The marble pendant from the prehistoric settlement mound Maleva Mogila near the village of Veselinovo, Yambol municipality, Bulgaria

Tuesday 6th October 2020: Session III, IV, V

Moderators: Francesca Slim, Youp van den Beld, Dimitris Filioglou

Session III:

Human relations through material culture and art

Thomas Mumelter (University College London)
Affective fields in Akrotiri's miniature frieze, Thera

Diana Wolf (Université Catholique de Louvain)
Symbols as social strategy? Late Palatial hard-stone glyptic as identity markers

POSTER: Anna Filipek
One but many. The concept of the great mother goddess in the study of the Minoan religious system in the Bronze Age

Session IV: Human relations viewed from material culture

Evgenia Tsafou (Université Catholique de Louvain)
Identifying the changing function and use of cooking vessels in Minoan societies

Assunta Mercogliano (Ca' Foscari University of Venice)
Breaking ceramic boundaries: formation and change in pottery assemblages during the Middle Helladic period with a special look at the Trapeza settlement (eastern Achaia)

Session V: Human relations with the economic landscape

Giulia Paglione (Sapienza University Rome)
Reconstructing the landscape through the Linear B texts: the case of coriander cultivation in Phaistos

Anastasia Vergaki (National and Kapodistrian University of Athens)
Lonesome are hee yes: The depiction of the animals on the Ayia Triadha sarcophagus

Abby Durick (Fulbright Student Researcher, Bulgaria)
Origin to deposition: the socio-cultural significance of gold provenance studies in the North Aegean and Ancient Thrace

POSTER: Jakub Witowski
Relation between the form of Aegean swords and modes of use in the light of use-wear analysis – the case of two bronze swords from the Athenian Agora

Symbols as social strategy

Negotiating change in the Final Palatial Period through glyptic

Diana Wolf

Abstract. *Minoan glyptic in the Final Palatial Period frequently contains iconographic devices, such as figure-of-eight shields, impaled triangles, but also plant devices, many of which are conventionally understood as symbols. These devices regularly occur on a group of LM II-III hard-stone seals, which this contribution aims to explore in the context of societal change in this period. Rather than attempting to understand the semantic significance of the symbols, the iconographic elements on the group of Final Palatial seals are considered in their syntactical arrangement, revealing patterns of interchangeability. This is taken as the basis to explore the motivation and intentionality behind the creation of these seals. Set against the sociopolitical background of the period, it is suggested that these novel seals were part of a social strategy aiming to promote claims to ideological and political power.*

Introduction

This paper explores the phenomenon of Late Minoan II-III A (LM, 1440/30-1370/60 BC, or Final Palatial) hard-stone seals with figural representations that frequently contain elements conventionally interpreted as symbols. Among these are figure-of-eight shields, impaled triangles, and floral devices. While these already appeared on Neopalatial (ca. 1700-1440/30 BC) seals and in other iconographic media, there is a distinct change in their usage in LM II-III A. Previously, such elements formed part of the overall iconographic composition and were typically engaged with by humans or animals. In the Final Palatial period, these devices seemingly ‘float’ in free space without any connection to the main motif (see figure 1).

Past research has produced two interpretations of the seals bearing these kinds of devices, considering the ‘floating’ elements either as religious symbols or as decorative fillers.¹ The remarkable polarity of these analyses obscures our understanding of the seals within their social, cultural, and political context. This reconsideration of the group of Final Palatial hard-stone seals proposes a complementary view that may mitigate the discrepancies of these positions. Within the framework of this conference, this contribution negotiates the change that the symbols in question underwent after the Neopalatial period. This will be firstly shown in the context of glyptic and secondly by considering ‘breaking boundaries’ in Final Palatial Crete.²

Terminology and theoretical background

The term *symbol* regularly appears in literature on Aegean Bronze Age iconography, but often in a vague manner. It

is understood somewhere along a theoretical continuum from ‘sacred’ to ‘profane’, a dialectic embedded into modern minds yet inadequate to reflect Bronze Age conceptual realities. This use of the word *symbol* can thus lead to ambiguity in the understanding of an object, scene, or iconographic idiom rather than helping to define or clarify it. While theoretical concepts from neighbouring disciplines, such as ethnography, sociology, and linguistics have helped to better understand symbolism *per se*, the lack of an emic perspective on the cognition of Late Bronze Age Aegean social groups limits our modern understanding of past ‘symbol-scapes’. Therefore, instead of pursuing further possible semantic meanings of a given symbol, this paper explores the motivation behind the use of symbols in the context of LM II-III A hard-stone glyptic.

In an interdisciplinary study of symbols, LeCron Foster and Brandes define symbolism as follows: “Symbolism is not merely representation but is a representational *process* that depends both for its creation and for its replication on human interaction within a culturally defined social setting.”³ As material manifestations of social discourses, symbols can become a source of social power and influence an individual’s or a group’s reasoning, actions, and identity. This is a phenomenon we still encounter today, and modern examples call to attention that symbols do not necessarily have to refer to religion or faith. Therefore, it can be quite misleading to make *a priori* assumptions about unequivocal ritual or religious implications of the symbols encountered in Bronze Age iconography. Moreover, symbols may refer to diverse “ideological or normative values.”⁴ Turner has demonstrated that symbols are part of “cultural and

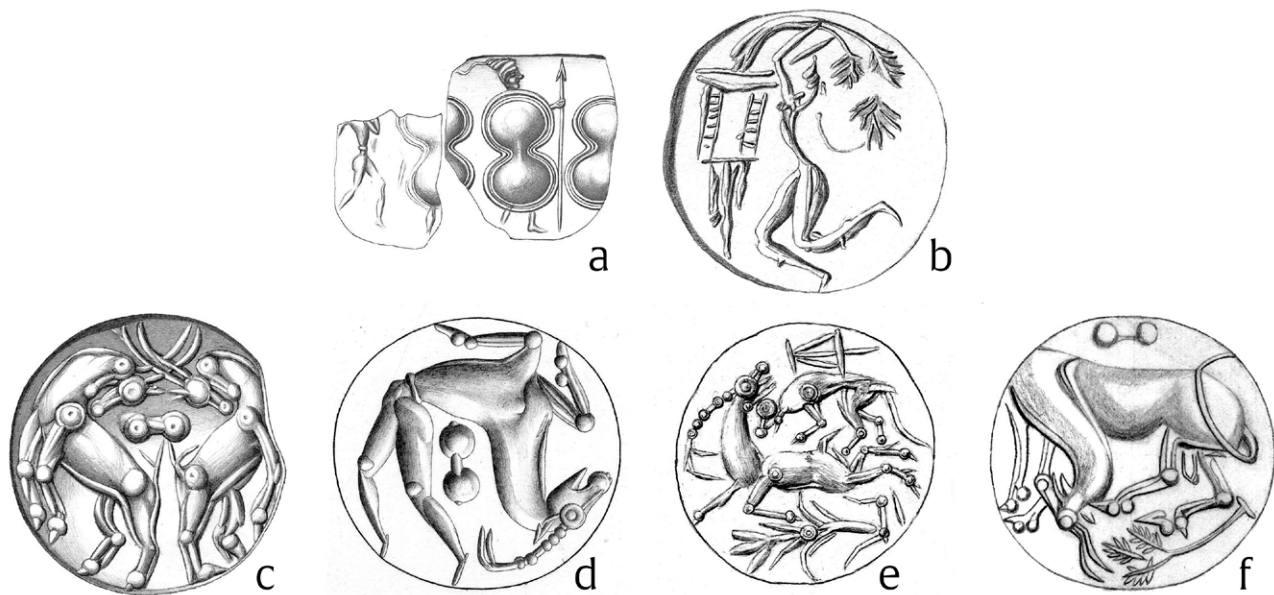


Figure 1. Top row: Neopalatial seals with actors engaging with devices: (a) a figure-of-eight shield carried by a warrior (CMS II8 no. 276, impression of a metal signet ring in clay); (b) a woman pulling at a tree (CMS XII no. 264, soft stone seal). Bottom row: Final Palatial hard-stone seals: (c) antithetical goats and figure-of-eight shield (CMS II3 no 107); (d) a hybrid goat-man with figure-of-eight shield (CMS V Suppl. 3 no. 113); (e) a goat attacked by a dog, an impaled triangle, and a plant device in between 'horns of consecration' (CMS VI no. 375); (f) a contorted bull with figure-of-eight shield and tree (CMS I Suppl. no. 71) (figures with courtesy of the CMS Heidelberg).

social values of a given society,⁵ and can contribute to consolidating values, turning them into ideological tools. Since symbolic interpretation is context-specific, but symbols can travel through temporally, spatially, and socially divergent contexts, the association and understanding of a given symbol may shift or expand. These processes potentially make symbols highly ambiguous to etic readers even when interpretative accuracy and clarity may have existed in the original context.⁶

Material culture can preserve fragments of communication codes established in past social settings. Symbols in the archaeological record are part of material culture and therefore material objects.⁷ According to Maran, their composition, association and distribution as objects can "create complex semantic interrelations among objects, places, narratives and practices."⁸ Instead of attempting to grasp the continuously evolving complex of associations of a given symbol, it may prove worthwhile to consider the motivation behind the consumption of symbols. In doing so, we can potentially relate to questions of access to, and use of, certain symbols by specific social entities. This approach enables us to neglect questions of emic meanings, an otherwise major challenge for scholarship.

Late Palatial hard-stone glyptic with 'symbolic' devices

After the Neopalatial destructions, noticeable changes occur within the glyptic record across the Aegean (see figure 2). The types of semi-precious stones used to cut seals are reduced and the choice of seal shape shifted mainly to lentoids. The motif spectrum becomes more limited while the

average seal size increases. Figural representations evolve from the fluent naturalistic style of the Neopalatial period into more rigid, graphic expressions.⁹ The rather graphic appearance is a result of a different application of the rotary tools, which are not disguised as before when this was done in order to enhance the 'naturalistic' appearance of figures. Rather, circular drill holes made by hollow and solid drills are combined with linear elements made by the cutting wheel, which results in somewhat stiff, stylized figural motifs. These are frequently accompanied by unconnected devices. Due to the overall changes in glyptic after the Neopalatial period, I suggest adopting the term *stylized-naturalistic group*, which takes into account both the iconographic origin and the new engraving style of these seals.

In an approach to Neopalatial glyptic images, Wedde observes that "specific zones of the seal face [...] contain usually one type of element, suggesting a relationship of equality between all objects placed therewithin, and permitting the establishment of syntactical rules governing what can or cannot occupy one area."¹⁰ Final Palatial glyptic likewise reveals syntactical rules for the engraving. Two zones could be chosen for the main iconographic element, usually an animal or a fantastic creature. This is either the centre or the perimeter of the lentoid seal face (see figure 3). In the latter configuration, the main representative element is frequently rendered arching around the seal face, usually with a contorted mid-section. Subjacent pictorial structures were placed in the free space above, below or in front of the central figure (see figure 3, top row) or in the centre of the seal face or below the figure's abdomen (see figure 3, bottom row). The selection of subjacent devices is limited, so

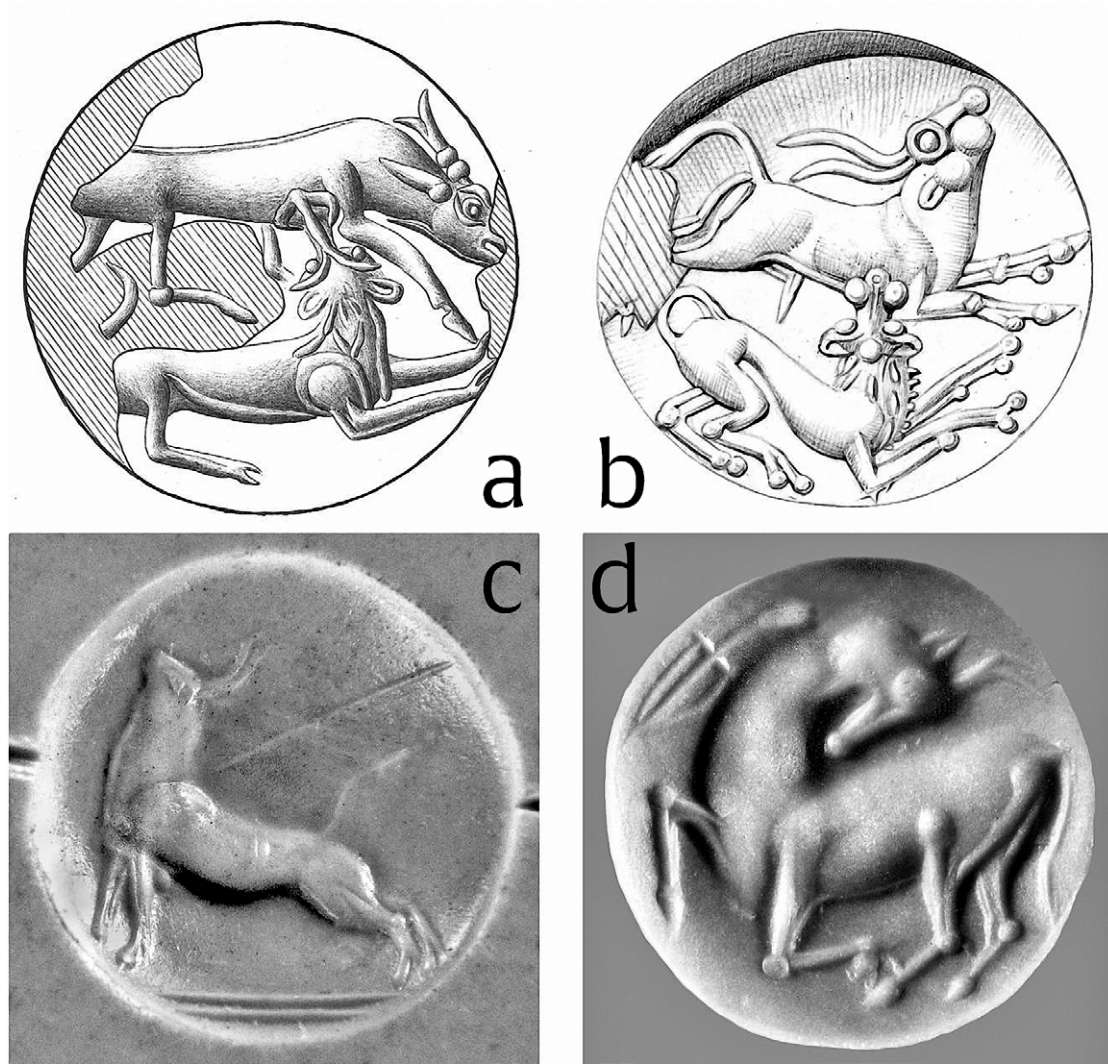


Figure 2. Comparison of rather naturalistic Neopalatial seals (2a and c) and more stylized Final Palatial seals (2b and d). Drawings of animal attacks: (a) CMS II8 no. 356; (b) CMS II3 no. 44. Modern impressions of seals with bulls: (c) CMS VII no. 56a; (d) CMS VIII no. 107 (figures with courtesy of the CMS Heidelberg).

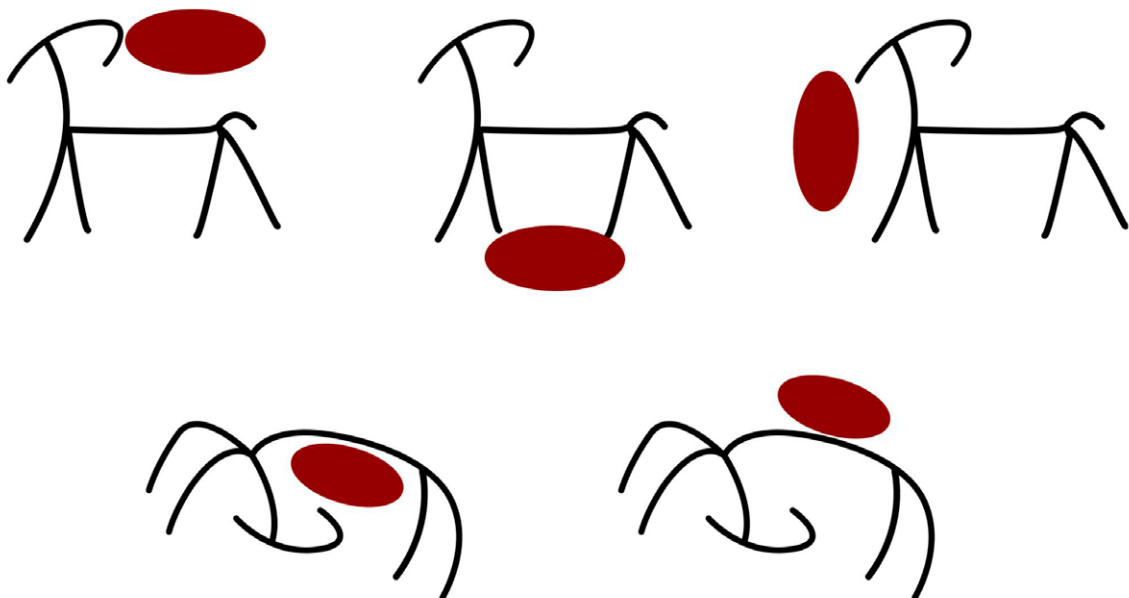


Figure 3. Syntactical rules in the LM II/IIIA stylized-naturalistic group. Possible locations of the 'floating' devices indicated by red ellipses (figure author).

the three prevalent types are discussed here: figure-of-eight shields, impaled triangles, and plant devices. Only very few seals depict other devices, like linear double axes (e.g. CMS XII no. 250) or 'stars' (e.g. CMS II3 no. 118, VI no. 299). Apart from inhabiting the same zones of the engraving, they share one more feature: the lack of a physical or interactive relationship to the main design.

For this study, 103 seals bearing non-floral devices conventionally understood as symbols have been collected, skirting highly fragmented or badly preserved seals on which the original syntactic interplay could not be observed. The vast majority dates to LB II (ca. 1440/30-1390), II-III A1/2 (ca. 1440/30-1340/30) or LB III A1/2 (ca. 1390-1340/30). Only four seals are dated to LM I (ca. 1600/1580-1440/30) and another thirteen to LB I-II (ca. 1600/1580-1430/90).¹¹ We are, therefore, clearly dealing with a phenomenon typical of the Final Palatial period.

Figure-of-eight-shield

The figure-of-eight shield is the most frequently appearing non-floral device in Final Palatial hard-stone glyptic. It occurs on 48 of the seals within this study (e.g. see figure 1a, c, d, and f). They are found throughout the Aegean, with a concentration in central and north-central Crete and the Argolid. The main figure on seals with figure-of-eight shields is most often a single quadruped or a hybrid human-animal. A small amount of seals display animal-attack scenes or heraldic compositions. The shield can appear in the centre, above, beneath, or in front of the figure. Originally a defensive weapon, it was soon configured in various media such as seals, faience objects, wall-paintings, and jewellery. In a recent article, Nikolaidou traces the deployment of the former defensive weapon in art and iconography, observing that "much of the visual and symbolic elaboration of the figure-eight shield occurred AFTER the weapon itself became

obsolete,"¹² which coincides with the period when the stylized-naturalistic seals were created.

Impaled triangle

'Impaled triangle' is the conventional term for a device that consists of a triangle divided by a line running through its base (see figure 1e). It appears in variants with an open or closed triangle and sometimes with a short, perpendicular line at the tip. Its linear scheme resembles a character of script. In fact, it has regularly been identified with the Linear B ideogram for wheat, but scholars have also interpreted it as a bladed weapon or stylized tree-standard.¹³ As a device, it occurs on 29 seals in this study, most of which were found on Crete or whose origin is unknown but conceivably Cretan. Three seals were found on the mainland in burials at Mycenae.

The impaled triangle mainly accompanies bulls and hybrid bull-men, but also goats and lions. Younger has proposed that it was employed as an ideogram to declare a bureaucratic function of a seal.¹⁴ In fact, a minimum of five seals with impaled triangles were used to impress clay sealings at Final Palatial Knossos (CMS II8 nos. 366, 455, 503, 509, 529). However, this seems to merely reflect wider glyptic trends of the phase, as quantifiable data indicate no bias for seals containing script in the Linear B administration. Nevertheless, Younger's approach touches on an important factor emphasised by Gill that "[...] in semi-literate communities letters tend to be regarded with awe and superstition, and attributed with magical value."¹⁵ While the device must have originally had a specific meaning, the occurrence of variants in the glyptic record may indicate that the linear design imitated contemporary script in order to add symbolic value to the seal. Following Nikolaidou, this possibly "points to the interrelatedness between writing and associated marking codes and pictorial and material

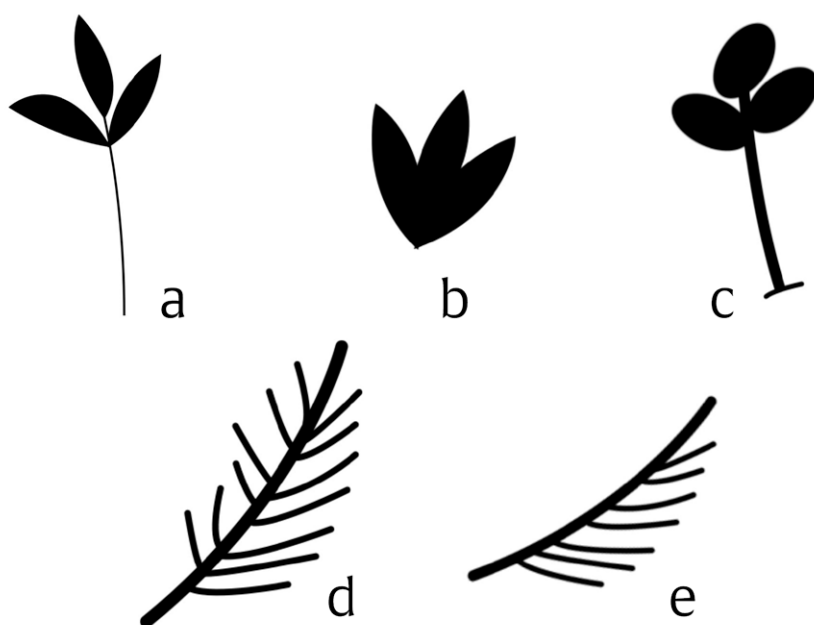


Figure 4. Recurrent plant devices in the stylized-naturalistic group: (a) three-leaved plant with stem; (b) three-leaved plant; (c) tree with stem; (d) two-sided fir branch; (e) one-sided fir branch (figure author).



Figure 5. LM II-III seals with double axes. Left: as a linear 'floating' symbol between both bulls and as a representational device on top of their heads (CMS XII no. 250). Right: as a linear device on top of the elaborate headgear worn by a female figure who is flanked by two griffins (CMS II3 no. 63) (figures with courtesy of the CMS Heidelberg).

signification."¹⁶ Taking Wedde's approach to the zoned seal face, one notes that the impaled triangle is easily interchangeable with other subjacent pictorial elements. This may indicate a more abstracted understanding as a symbol that was not necessarily based on its similarity or replication of script.

Plant devices

The third recurrent device type in the LM II/III stylized-naturalistic group is comprised of plants. Floral devices can occupy the same zones of the seal face as the previous elements. In this study, the occurrence of seals with plant devices has not been quantified, as their categorisation shows some disparities due to inconsistent terminology and identification. For example, feathered arrowheads are often designated as three-leaved or fan-shaped plants and vice versa because of their similar shape.¹⁷ The Final Palatial plant devices strongly differ from Neopalatial naturalistic trees and shrubs which often appeared in the context of Minoan ritual or a landscape setting (e.g. on CMS XII no. 264; I no. 274). However, in the stylized-naturalistic group, the floral devices comprise schematic three-leaved plants, trees, or branches (see figure 4, and figure 1b, e, and f). They can be found in varying orientations in the same zones above, below, or in front of a central figure or motif and are thus iconographically interchangeable with the non-organic devices in this study.

Double axe

Lastly, the double axe is a contrasting case. Despite its longevity and popularity in Aegean Bronze Age iconography, it constitutes an infrequent device on seals. It occurs in only seven instances within the group under study. While it can be employed as a subjacent element, the double axe is also

regularly connected to other iconographic items, such as the headgear worn by a female figure or topping a bucranium (see figure 5).¹⁸ This stands in contrast to the other devices discussed and may indicate that it played a different, more fixed role in social cognition. The more frequently employed but syntactically unconnected devices, on the other hand, appear to have been more easily interchangeable.

Symbols as social strategy?

As mentioned above, two strands of interpretation of the devices under discussion appear in the literature. Gill explained the new convention of devices 'floating' on seals as the result of a need for talismanic value to avert evil or bring good fortune. Scholars such as Marinatos, Morgan and Niemeier have hypothesised that these devices are symbols which identify the depicted animals as sacrificial victims.¹⁹ These readings have been challenged by scholars including Nilsson, Krzyszkowska, and Palmer, who pinpoint a transformation of meaningful symbols into decorative fillers after the Neopalatial period.²⁰ A 'symbolic change' has also been recognised by Nikolaidou, who demonstrates that symbols and formulaic patterns from earlier periods are combined in new variations from LB II onwards.²¹ This observation, firmly grounded in the material culture of the phase, may provide a middle ground to understanding what happened not only in glyptic, but in society during this time.

Let us shift the focus from investigating the symbolic reference and connotation of the devices in the group of stylized-naturalistic seals towards the question of *intentionality* and *motivation* behind their creation. After the Neopalatial collapse, the inhabitants of Crete were confronted with fluctuation and change on many societal levels. Knossos remained as the only functioning palace on the island. The character of its administration underwent numerous

changes, including the introduction of a new administrative language and shifting social hierarchies modelled on mainland prototypes, both recorded in the Linear B documents. Transformations on the levels of cultural practices and material culture have been observed throughout the Final Palatial period, often displaying influences from the Greek mainland alongside conscious recourses to traditional Neopalatial forms, which can be recognised, for instance, in architecture, wall-paintings, and glyptic.²²

The symbol-bearing seals of the stylized-naturalistic group are one manifestation of innovations in the material culture. They combine a novel style and adjusted syntactical rules with traditional visual vocabularies and symbols. The seals were made from semi-precious, mostly imported stones that were not easily available. Specialised craftspeople and technology were necessary for working these hard materials. The resources were likely under control of the central administration, as indicated, for example, by the presence of large blocks of the semi-precious *lapis lazuli* in the Knossos lapidary's workshop.²³ Therefore, only the members of well-to-do social units could potentially afford such seals. This is reflected in the archaeological contexts, which comprise rich burial assemblages throughout Crete and the mainland. For example, three stylized-naturalistic seals with symbols were found in Kalyvia: one in grave 8, which also contained swords, bronze tools, a necklace of gold and glass and altogether five seals. The second, in grave 9, accompanied jewellery and fragments of gold and glass and two further seals. The third derives from grave 1, in which glass beads and fragments of gold jewellery were recovered.²⁴ Similar patterns can be observed elsewhere, as at the cemeteries of Isopata and Sellopoulo at Knossos,²⁵ and several burials in the necropolis of the lower town of Mycenae. Therefore, it can be stated with a fair amount of certainty that a privileged group with restricted access to prestige goods was responsible for the production, dissemination, and consumption of the seals under discussion. But what was the underlying intention of their creation?

The end of the Neopalatial period encompassed social disruptions due to the loss of political, economic, and religious centres all over the island of Crete. The resulting power vacuum, before occupied by elites at the now-destroyed palaces, likely occasioned the breaking of previous social boundaries. Power relationships had to be renegotiated in an ongoing competition for political, religious, and ideological power. The materialisation of ideology posed a means of manifesting and promoting a social unit's claims to authority. Seals are an ideal medium for such a strategy, as they are durable, mobile objects that are easy to distribute. By materialising ideology in the form of symbols, a social unit could manifest its identity in an emblematic way and strategically communicate its claims to political, religious, or ideological authority.²⁶ The small size of a seal naturally restricted its visual perception by others. A seal worn on the body could be spotted by a passer-by who could potentially make some inferences by the way it was worn or the

color of the stone (which may have been imbued with social symbolism). However, only a small range of viewers would have had access to the iconography of the intaglio, either on the engraved seal face or from impressions made in clay. The addressees of the symbol-laden iconography were thus restricted and likely stood in a fairly horizontal social relation with the owner of such a seal. The seals in this study are perhaps a result of strategic efforts of an uprising social unit aiming for political power after the disruption of the Neopalatial order - perhaps in competition with a hierarchically close social group. This unit possessed substantial economic influence that allowed its members access to semi-precious foreign materials and (at least some) control of their production. They likely also had a certain degree of social power, enabling the distribution of materialised ideology possibly among other high-ranking social units. Such addressees could potentially help to establish the aspired political power in an arena of factional competition - a scenario further evidenced by the period's rich burial customs²⁷ - through ideological manipulation.

Hamilakis has emphasised the diligence of factions to establish and maintain corporate identities, usually based on shared cosmologies and ideologies, in order to counter instability and fluctuation of power.²⁸ The seals with their novel syntactical rules and the seemingly detached, floating symbols may have served to evoke a shared corporate identity of a faction among its members, but also to generate new affiliations. In order to succeed, the medium of material expression had to fulfil several demands: 1.) to stand out from traditional forms; 2.) to formulate a special status or claim; 3.) to integrate potential new supporters, and; 4.) to reconcile tradition with innovation in order to bridge the gap caused by 'breaking boundaries'.

To conclude, the novel style and syntax of the seals enabled them to stand out from the established glyptic record. Symbolically laden devices communicated a special status while the continued use of popular motifs appealed to broader groups. Finally, the rendering of traditional motifs in a new style could potentially serve to reconcile the old with the new, and to legitimise the assertions to power on behalf of the initiating faction. These factors made the symbol-bearing hard-stone seals of the Final Palatial Period an ideal medium for a social strategy aiming to promote a group's claims to power.

Acknowledgements

The research for this paper was funded by the F.R.S.-FNRS, whose support I am very grateful for. I would like to thank my supervisors, Prof. J. Driessen and Dr. M. Anastasiadou, for their ongoing encouragement and support in my research. I would also like to express my gratitude to Prof. D. Panagiotopoulos who has kindly allowed me to reproduce images that are copyright of the CMS Heidelberg. Finally, I would like to thank Courtney Piper for correcting my English and the anonymous reviewer(s) for helpful comments on the manuscript.

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Endnotes

- Palmer 2014: p. 40.
- CMS numbers in this text refer to the catalogue numbers in the *Corpus of Minoan and Mycenaean Seals*. All catalogue entries, photographs and drawings are available in open access through https://arachne.uni-koeln.de/drupal/?q=de_DE/node/117.
- LeCron Foster & Brandes 1980: p. 3.
- Turner 1967, after Chountasi 2015: p. 303.
- Turner 1967, after Chountasi 2015: p. 303.
- Petrakis 2011: p. 186.
- DeMarrais et al. 1996: p. 16.
- Maran 2016: p. 586.
- Krzyszowska 2005: pp. 196-199 traces the glyptic developments in this period in more detail.
- Wedde 1999: p. 911.

- 11 A definite chronology for Aegean Bronze Age seals is still lacking. Many seals have been dated on stylistic accounts, by correlating them with seals from stratified contexts that were dated by ceramics. When used here, "Late Bronze" (LB) incorporates seals found both on Crete and the mainland as well as seals with unknown provenance, while "Late Minoan" (LM) designates seals of clear Cretan origin.
- 12 Nikolaidou 2020: p. 3 (emphasis in the original).
- 13 Palmer 2014: p. 39 with indicated references.
- 14 Younger 2000: p. 350.
- 15 Gill 1966: p. 14.
- 16 Nikolaidou 1998: p. 206.
- 17 For example, in the Arachne database CMS VII no. 250 and XI no. 174 both have the same device, occurring above the back of a quadruped, whose head is turned backwards, facing it. In the first case, the device is called "Dreiblatt mit Stamm" (three-leaved plant with stem), in the second "Pfeil?" (arrow?), see <http://arachne.uni-koeln.de/item/objekt/164985>; <http://arachne.uni-koeln.de/item/objekt/167407>.
- 18 For a pivotal discussion on the double-axe, cf. Haysome 2010.
- 19 Gill 1966: p. 14; Marinatos 1986: pp. 25, 64, 71; Morgan 1995: pp. 142, 145; Niemeier 1997: p. 308.
- 20 Nilsson 1950: p. 410; Krzyszkowska 2005: p. 209; Palmer 2014: pp. 39-40.
- 21 Nikolaidou 1998: pp. 201-203, 209. See further Palmer 2014: p. 288.
- 22 Popham 1984: pp. 263-264; Driessen & Langohr 2007: pp. 179-180, 185-189.
- 23 Warren 1992: pp. 290, 292.
- 24 On the contexts see Pini & Platon 1984: pp. 113-114.
- 25 Cf. Verduci 2020: pp. 196-198.
- 26 Cf. Nikolaidou 1998: pp. 203, 209; Haysome 2010: pp. 42, 49; Eder 2016: p. 176.
- 27 Cf. Preston 1999; Verduci 2020, and indicated references.
- 28 Hamilakis 2002: pp. 186-187, 193.