Minoan Realities
Approaches to Images, Architecture, and Society in the Aegean Bronze Age

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In his visionary novel “Die andere Seite” Alfred Kubin described the social context of images at his imaginary capital Perle as follows:

“Besondere Museen, Bildergalerien etc. haben wir nicht. Wertvolle Kunstwerke werden nicht aufgestapelt, aber im einzelnen werden Sie gar manches außergewöhnliche Stück erblicken. Es ist alles verteilt, sozusagen im Gebrauch.”

Kubin’s words perfectly describe the actual function of images in an ancient society, where they were not contained in museums but instead filled a position in public or private spaces, where they could be used or ‘abused’ in manifold ways within the course of daily life. It took archaeologists some time to recognize this fact and distance themselves from an antiquarian perspective, according to which images were regarded and interpreted as works of fine art removed from their original social context. The way we view ancient images has, however, been changing during the past 20 years and especially in the last decade. The beginning of the 21st century marked a series of cultural turns that gradually transformed social disciplines, including among others an iconic/pictorial turn referring to the new interest of social and exact sciences in non-verbal forms of communication, the spatial turn, the performative turn, etc. Even if some scholars regard these turns as purely ephemeral rhetorical designs and not as a proper theoretical paradigm, there can be no doubt that they exercised a strong influence on our disciplines and significantly changed the way we look at images. Art history has evolved to an image science.

Following the footsteps of this discipline, archaeology has experienced a major shift of interest from the creation to the perception of ancient imagery. Not the artist but the viewer suddenly became the main focus of scientific enquiry. The image has been liberated from the sterile environment of the museum and brought back into its original spatial and social context. Art historians and archaeologists have slipped into a new role as ‘embedded journalists’ attached to the spectators of the past and have begun to offer a new ‘coverage angle’ of ancient images elevating the sense of their Sitz im Leben, their purpose in life, to a very high degree. This new line of thought does not aspire to replace but only to complement the old formalist model, thus introducing a new and holistic approach to visual culture in ancient societies.

Another cultural turn has befallen the understanding of space. Since the 1980s, space has become a new or, rather, ‘rediscovered’ unit of perceiving and thinking relationships between beings and objects. Now considered chiefly as a social construct, space has been attracting special attention as a device to consider particularly synchronal phenomena and systemic manifestations of social and cultural life. Since this spatial turn, space has been considered as a dynamic dimension, permeating as a structuring medium the relational arrangements of living beings and objects which occur continuously in the performance of social practices in certain places. Methodologically, the constitutive subjects, i.e. the living beings, and the objects, i.e. artefacts and architecture, as well as the relation between them have to be considered in order to understand the different spaces reproduced and experienced by social individuals in particular places of their living environment.

* We would like to express our sincerest thanks to Tina Saavedra and Saro Wallace for their help in checking the English of the contributions.

1 Kubin 1994, 19.
4 See, for example, Düne and Günzel 2006, 11–15; Bachmann-Medick 2006, 284–28; Döring and Thielmann 2008; Günzel 2008.
5 Löw 2001; Maran 2006, 9–10. On relational space as medium in a phenomenological perspective see also Tilley 1994, esp. 7–34.
This relational concept of space is, however, not completely new to archaeology: in fact, archaeologists had begun already by the mid-20th century to argue for a comprehension of archaeological findings according to the relation between them in their find positions. The ‘relational’ understanding of the spatial arrangement of objects such as artefacts and architecture can be termed as a kind of ‘place holder space’ when seen through the eyes of a space sociologist who is used to considering primarily living beings and objects in their spatial relationship. However, this divergence of space in its actual ‘social’ understanding on the one hand and archaeological space on the other hand is by no means mutually exclusive. Indeed, it has been used most effectively in the study of architectural remains, where, from the 1980s onwards, stimuli from social and architectural theory have been leading to a development of theories and methodologies in studying social aspects of architectural space. Architecture has thus become the ‘material incarnation’ of social structures, exerting a great effect on structuring social life, practices and behaviour and thereby maintaining the established – but certainly not immutable – dynamics of power and social relationships.

In this conflation of spatial and social constellations, images play an important role as a visualization, manifestation and ‘presence’ of social and cultural ideas, ideals and beliefs. The pictures afford their placing, use and shared perception, and serve to provide visual statements and stimuli in various situations and contexts of social life. Being considered as part of the ‘material’ side of social space, images contribute not only an emblematic or narrative aspect to a social situation but also a visually as well as mentally perceivable aspect of the social space. The function of images within social contexts of course depends on cultural conventions. These conventions in turn determine not only where these images are to be displayed but also on which kinds of media and in which form, and, finally, what images are to be displayed, i.e. what kind of representation is appropriate to which medium and context of use in specific. These circumstances of contextualizing images may therefore vary according to the society and culture linking both media and pictorially represented ideas to social practices. Understanding from an archaeologist’s perspective where, how and which kinds of images are both incorporated into social spaces and related to social practices can therefore reveal very basic concepts of associating pictorially recorded ideas with people, objects, and actions in a particular visual culture.

Again from an archaeologist’s perspective, and in addition to their direct involvement in social situations and practices, images may also serve as external sources for the re-construction of social spaces. It is widely accepted that pictorial representations are not direct but biased ‘impressions’ of everyday life. Nevertheless, pictures capture visually and perpetuate ideas, meanings and values of relevance to a given society and thus can to a certain degree be understood as ‘documents’ of activities, habits and power relations which are considered or established as common, prevailing, or aspired in a given society. In a sociological perspective, people who and objects which have been depicted on a shared picture surface can be understood as having been set in relation to each other in order to reproduce a spatially envisioned social situation by means of this very arrangement of both the figures depicted and their spatial relations. Although the spatial position of the figures depends on both pictorial conventions and the surface provided by the medium, it reflects the mutual and positional relationships of the beings and objects represented by the pictorial elements as they are conceptualised and structurally established within the ‘reality’ of the society producing the images. A human figure, for example, who is characterised by sex, hairstyle, and dress, and frozen in gesture vis-à-vis other human figures or objects, may be understood as a representative of a particular social group involved in an activity addressing another representative of a social group or a specific material structure. In this way, ‘social space’ in its widest sense can be approached by considering either distinctively represented human figures and the relations which were established between them alone or together with the objects accompanying them, through their copresence as well as through their mutual relationships implied in gestures, postures and orientations towards each other. Along these lines, images too become valuable sources for the re-construction of spaces as they were conceptualised, pictorially ‘documented’, and perpetuated by a given society and permeated the arrangements of their social interactions and practices.

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6 Taylor 1948; Clarke 1977; Seibert 2006; Salisbury 2007.
7 On sociological models of space see Löw 2001; Schroer 2006.
8 See inter alios the seminal work on The Social Logic of Space by Hillier and Hanson (1984).
9 On this topic see also the contributions in Maran et al. 2006.
10 Harrison 1991; Saint-Martin 1990; Huth 2010. Referring to Minoan archaeology, a similar idea has been developed by Christiane Sourvinou-Inwood (1985).
Reuniting both genres of sources for reconstructing past social spaces, images and architecture may be considered as complementary, the former filling with life and meaning the bare framework provided by the latter, itself meaningful in many aspects. On the one hand, both are material and visual components of the daily routines and practices of social life, serving as structuring, explanatory and illustrative stimuli for people moving and acting within the lived-in world. On the other hand, both have been created by social groups in order to epitomize and/or maintain established social and structural relationships which claim to, or are intended to claim to, a notion of normative and enduring values and persistence. In this regard, both images and architecture may be understood as reflections of social situations and issues, influencing both the creation and reproduction of social spaces and regulating the forms of interaction in a particular culture.

What the recent theoretical advances in the study of images and architecture have thus in common is their pronounced interest in what archaeology cannot directly document: the people who created their material world and interacted with it. The challenge to archaeological research is therefore to develop hermeneutical models to elucidate how architecture and images responded to prevailing social structures, how they were designed to both epitomize and to express the intentions and purposes, and how they were to make their impact on the performance of social practices. Several models have been already applied to overcome the strongly descriptive level of traditional archaeological approaches and to give shape to what lies behind the tangible objects. The theoretical approaches are generated by the common interest for the ‘reality’ in which the images and built structures once fulfilled their purposes. In this context, ‘reality’ can be used as an analytical term demanding for an integrative approach to images and architecture considered to be constitutive elements of ancient contexts of action and perception. The concept of ‘reality’ covers a multiplicity of facets related to an individual’s or a collective’s Weltanschauung. To live in a community means to share a certain aspect of ‘reality’ which establishes the basis for each individual’s action within the world. This common set of rules, practices, experiences, and beliefs shapes the structural order of the living world. Social activities build upon these structures and are in turn expressed by them. The term ‘realities’ (in the plural form), therefore, can serve to unify the various social structures with their collectively shared and attributed meanings. There can be no doubt that the attempt to reconstruct practices, ideas, beliefs, and aesthetic experiences in a ‘prehistoric’ society is a speculative, yet necessary endeavor. Only when buildings, objects and images are embedded into a specific context of ancient ‘reality’ can the cultural significance of these material remains be fully exploited.

In this sense, the workshop “Minoan Realities. Theory-Based Approaches to Images and Built Spaces as Indicators of Minoan Social Structures”, which took place on 16 November 2009 at the University of Heidelberg, was situated at the juncture of the iconic and spatial turn. The aim was to explore the question of how the current theoretical and methodological approaches can be meaningfully applied to the field of Minoan archaeology to illuminate the social role of pictures and built environments from an integrative perspective. Given the dilemma that Minoan culture has left us with a magnificent but silent material record, these images and constructed environments can be considered as our most important sources in order to address questions regarding the strategies of creating appropriate circumstances for the performance of social practices. During the different phases of the palatial period of Bronze Age Crete, images and architecture were at any one time used in specific ways as visually and spatially structuring and defining elements of communal life. Images in particular had an important role to play in cultic, ritual and administrative spheres but also served as personal adornment to enhance the ostentatious behaviour of the elite. In these areas images served their function as visual devices manifesting or making present the ‘deeds’ of human figures, the symbols of distinguished social groups and entities, or the plurality of a natural world. Architecture, on the other hand, served to provide and designate the appropriate places for the performance of social activities.

This involvement of images and architecture in routine communal life becomes very obvious in the so-called Neopalatial period (Middle Minoan III to Late Minoan I), when a very specific ‘palatial’ architectural design and a new way of “styling”, distributing and using pictorial artworks proliferated. From an architectural standpoint, along with the almost island-wide appearance of the new palaces and the so-called villas, the distribution of ‘Minoan Halls’, polythyron halls, ‘Lustral Basins’ and other types of rooms which were variably embellished with paved or plastered floors, plastered and/or painted walls or gypsum incrustations also became prevalent. These new forms of spatial arrangements generally seem to reflect certain types of

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12 On the ‘Minoan palatial architectural style’ see generally Driessen 1989–90.
ritual practices, which were in part developed on a localized basis in the preceding Middle Minoan period and which were now institutionalised on a larger scale to be performed in the various areas of Neopalatial Crete and, to a certain degree, beyond\textsuperscript{13}. By the end of the Neopalatial period, most of these room types went out of use; a clear indication that the practices were also no longer being carried out in the previous way.

As a parallel phenomenon, iconic artefacts now increasingly served to visualise selected ideas and themes of relevance within certain spatial and social contexts. Consisting of a quite limited and repetitive repertoire of pictorial themes and motifs, Minoan ‘palatial’ imagery not only provides a very selective view of aspects of social reality, but also points to a highly specialised ‘visual language’ which was implemented for conveying specific topoi of meaning within a restricted range of social situations and contexts\textsuperscript{14}. To judge from the pictorial themes, the images and topics represented can be mainly attributed to the spheres of religious and ritual practices, palatial ideology, and construction of social identity. Such pictorial representations were applied, among other uses, on the walls of architectural units designed for social activities, on vessels used in ritual performances, and on seals and signet rings which served as markers of elitist or official status. They were reproduced in the course of administrative sealing practices in the form of seal impressions or they took the shape of three-dimensional figures and figurines to be placed in sacred caves, peak sanctuaries, and other areas of religious or ritual practice, perpetuating in human form veneration on behalf of the faithful. Both the distinctive style and the intermedial analogies of elements and motifs between the different categories of pictorial artefacts point to the coherence of this Neopalatial ‘visual language’. In addition, wall paintings offer the link between this pictorial language and contemporaneous architecture, making clear that both the ideas embodied and expressed in the images and the social practices performed within the architectural environments were in some ways correlated. At the end of the Neopalatial period, when numerous architectural places were abandoned, many of the topics used in pictorial language were discontinued as well\textsuperscript{15}. This evidence points to major changes in Minoan social life and structure, concerning especially the actions and interactions for the appropriate execution visual language as well as the architectural places had been created\textsuperscript{16}.

In this era of Bronze Age Crete both images and architecture thus had played an important role as factors of Minoan social spaces. It is therefore necessary to go beyond the mere description of pictorial representations or architecture and to discuss their perception and use as visual and constitutive elements of Minoan ‘realities’. Based on these considerations, the aim of the workshop on “Minoan Realities” was to present various approaches to, and perspectives on, the Minoan material record in order to reveal its potential as providing the required structures for the realisation, localisation and performance of social activities. A special focus was laid on the role of images as visual components of spaces and as mediators of meaning linked to the social activities in relation to which they fulfilled their role. We are grateful to the participants and contributors for having accepted our invitations to share with us their approaches to the construction and agency of ‘Minoan realities’ by means of images and built structures.

The papers collected in this volume proceed from approaches considering the reciprocity of images and constructed environments towards approaches addressing the social dimension of built spaces and images. In the first two papers, the architectural settings of wall paintings are analysed in different ways in order to achieve new insights into practical issues related to their accessibility and perception. Clairy Palyvou (Thessaloniki, Greece) analyses the movement through built environments with wall paintings and their perception. She explores the connections and interrelations between the real architectural space and the space depicted on the wall paintings in quest of artistic and architectural intentions. Using the examples of the West House and building Xesté 3 at Akrotiri, Thera, she discusses the ways in which the artists linked architectural space with pictorial space in order to provoke specific emotional reactions and guide the viewer in reading their meaning. Quentin Letesson (Louvain-la-Neuve, Belgium) uses the method of space syntax analysis to examine the spatial configuration of rooms decorated with wall paintings and stuccoes in Neopalatial buildings. Applying a qualitative and quantitative approach he delineates recurrent patterns in their structural properties and explores their spatial connections and integration, their accessibility and role within

\textsuperscript{13} On the ancestry of the Minoan Hall system see now Shaw 2011. On early lustral basins at Knossos and Malia see Niemeier 1986 with further references; Platonos 1990.

\textsuperscript{14} Compare also Rehak 1997, esp. 61; Gates 2004; German 2005.

\textsuperscript{15} Rehak 1997; Driessen and Macdonald 1997, 59–64.

\textsuperscript{16} On one explanatory model see Driessen and Macdonald 1997.
the circulatory pattern as well as the visual properties and controllability of the built environment. His aim is to achieve a better understanding of the practices related to the decorated rooms by means of understanding the spatial context of the wall paintings.

Approaches to Aegean wall painting in a more general perspective are presented in the following three papers dealing with basic aspects of composition and perception of the visual language as well as with the social and political contexts of the images, their viewers and ‘users’. Diamantis Panagiopopoulos (Heidelberg, Germany) offers a theoretical approach towards the polyvalent significance of Minoan and Mycenaean imagery, taking into consideration the various devices that produced the viewing experience. He defines the viewer, the image and the act of viewing as the basic elements of a triangle, which he then uses as a heuristic tool to reconstruct specific viewing situations. Having considered the social status of the target audience of Aegean imagery, he introduces the concept of Aegean decorum as a set of rules which operated at different levels determining the subject matter, style, medium and position of an image. Finally, he focuses on the ways of viewing and presents a new method of categorising Minoan wall paintings on the basis of the relation between the image’s theme and the architectural context. Looking at the artistic interrelations between the distinct art forms of Aegean Bronze Age imagery, Fritz Blakolmer (Vienna, Austria) proceeds from the assumption that a certain hierarchy of art genres existed in Aegean imagery, the iconography of mural images being copied on seal stones and objects of relief art. Based on this argument, he offers an attempt to reconstruct mural paintings by analysing an amount of elements and motifs recurrent on both the walls of palatial buildings and in small- and miniature-scale relief art. Furthermore, he explores the socio-political dimension of this artistic phenomenon, analysing the motives governing the circulation of images and highlighting the ‘palatial’ context of their production and use. Drawing too upon the iconographic interrelations between the different pictorial media of Aegean Bronze Age art, Ute Günkel-Maschek (Heidelberg, Germany) develops a theoretical approach to explore potential reasons for the choice of themes and motifs decorating the walls of particular rooms. Proceeding from the assumption that the application of the Minoan pictorial language on whatever kind of pictorial medium depended on this medium’s use, she argues that the significance, function and use of an architectural space decorated with wall paintings can be revealed through an examination of both the ‘fields of application’ of the depicted motifs and the reconstruction of the pictorial cycle from which the selected elements were taken. In this sense, three prominent motifs – the running spiral, the bull, and the ‘sacred landscape’ – are analysed in order to reveal aspects of the significance and use of the architectural spaces they decorated.

In the final two papers, ethnological models and data are used for comparison in two very different approaches to Minoan buildings and their social dimensions. Jan Driessen (Louvain-la-Neuve, Belgium) analyses the significance of architecture and images as evidence for gendered practices and spaces. He proposes an interpretation of Cretan Bronze Age society as a matrilineal and matrilocal ‘house society’, arguing that the residences of large families as well as ownership-structures were centred on and around women. After giving an historiographical overview of past and present views on Minoan gendered spaces and practices, he considers the environment and setting of public female roles by analysing the iconographical evidence, proceeding then to the discussion of gendered ceremonial spaces and their location within Minoan residential structures. Finally, Maud Devolder (Louvain-la-Neuve, Belgium) takes into consideration the construction of Neopalatial buildings and presents a quantitative approach based on labour costs analysis, focusing on the expenses relating to materials, techniques, and labour force, and employing ethnological data for an approximate estimation of the investments and their social implications. The application of her analytical instrument on three case studies (the palace at Gournia and two East Cretan buildings) opens a new perspective on the study of Minoan architecture, shifting the focus from its functional and aesthetic aspects to the social and economic strategies involved in construction projects of different scales.

The present volume, thus, offers a variety of theoretical and methodological ways of thinking about buildings, images, and the social structures which go beyond their appearance and use. New insights have been gained concerning the design, perception and experience of decorated spaces, the ways of providing meaningful atmospheres for social activities, and the reflections, in images and architecture, of ideological and religious concepts as well as gender-related activities and performances. Given the lack of written sources, these new approaches may be useful to everyone concerned with understanding and reconstructing the way in which Minoan society defined the environment for practices and rituals defined by architecture and images so as to comply with the ideas and expectations of Minoan realities.
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Wall Painting and Architecture in the Aegean Bronze Age

Connections between Illusionary Space and Built Realities

Clairy Palyvou

In art size and medium matter… Take for example a small griffin depicted on an object that you can hold in your hands – a ring, a seal, a vase – and a large griffin painted on the walls of a room. The two evoke very different feelings and may convey varying messages. In the first case one relates to both the picture and the medium through abstract mental associations (a griffin depicted on a ring, for example, acquires its significance through the combined associations of the griffin as a symbol of power and of the ring as a symbol of status). In the case of a large griffin painted on the wall of a room, the symbolic meaning of the object depicted is probably the same but the second component, the medium, is more than the meaning of its materiality (the mental associations deriving from the knowledge that the wall belongs to a throne room, for example): looking at the picture on the wall is unavoidably part of a complex and rich experience, both corporeal and emotional, affected by the numerous parameters that shape our perception of the built environment. These parameters can function as potent tools in the hands of the artist and the architect, and may be used deliberately to manipulate and enhance the effects. It may be that once you have experienced a large griffin on a wall this recollection will always affect the way you see its small image on a movable object.

Movement, pause and arrest guide our perception of the built environment. More elaborate buildings provide a variety of possible ‘architectural promenades’ designed or established according to their function and the identity of the user: For a visitor, for example, the promenade starts at the entrance and carries the incomer through architectural space towards his final destination, some kind of reception hall, in an appropriate manner, avoiding or by-passing private areas. Within a specific cultural framework, much of this spatial arrangement (including wall painted spaces) and corresponding circulatory patterns are well known and the element of surprise or unease is thus kept to a minimum. This kind of familiarity eludes us as scholars; a misfortune as difficult to deal with as the missing parts of the building. Our decoding of architecture and monumental art, therefore, must rely on careful observation and sound arguments.

To narrow the discussion to the issue at hand, it is safe to assume, as a starting point, that the manner in which a person perceives a room with wall paintings depends on the characteristics of the promenade he has been following, and the properties of the architectural space, as much as those of the paintings; this inter-relationship is especially powerful when the theme depicted on the walls includes illusionary space. In this context, the goal of this paper is to explore the connections and interrelations between the real architectural space and the space depicted on the wall paintings in quest of intentions, both artistic and architectural. In other words, to explore to what extent, in what ways, and to what end the artist takes into account real space in order to provoke specific emotional reactions and guide the viewer in reading their meaning. A subsequent query, rather bold in its suggestion, is the possibility of the architect taking into account the theme to be depicted when designing the building; this of course would mean thinking far ahead when designing a house and also making decisions in collaboration with the artist. These questions will be addressed through two specific case studies from Akrotiri, Thera: the West House and building Xeste 3. The high quality of preservation of both the architecture and the paintings at this unique site offer a rare opportunity for a detailed discussion of this sort.

West House, Room 5

The West House is a rather typical house for the settlement of Akrotiri: It has a ground floor consisting of storage spaces and working areas, an upper floor where domestic activities took place and a second floor consisting of one room¹. The entrance is located at the corner of the house and opens into a staircase that leads

¹ For a general description of the building see Palyvou 2005, 45–53.
Fig. 1  The West House, Akrotiri: plan of the first floor.

Fig. 2  West House, Room 5, first floor (computer simulation by A. Kassios, architect).
to the upper floor. This is the staircase a visitor would use to reach the living rooms and the reception halls upstairs (fig. 1). The first room entered on the upper floor, Room 3, is a large square room with a central column, typical at Akrotiri and well known from Crete as the hub of the traditional house. This is where weaving took place and, presumably, where the family would gather. The room is entered from a door at a corner and the only other door leading to the rest of the upper floor rooms is situated diagonally at the other end of the room. This second door opens into Room 5: It is a square room (4 x 4 m) amply lit by two pier-and-window partitions occupying the largest part of the two exterior walls. Cupboards and doors occupy the other two sides of the room. The little there is in terms of wall surface is richly painted (the two Fishermen, the Miniature Frieze running above the windows and the dado simulation below) (fig. 2). These paintings have been discussed in detail in several publications; here we shall focus on certain aspects of the architecture and on the way the paintings were perceived and experienced by a person entering and moving within the room.

Stepping back into Room 3, one may notice a peculiar architectural irregularity: This very large room has a small extension at the point where the door leading to Room 5 is situated. It is clear that the extension was meant to accommodate the door. But why was this extension necessary? It always puzzled me that the architect ‘interfered’ with the corner of this room in a way that created all sorts of structural problems in this area, affecting not only the room itself (a weak corner) but also the small auxiliary staircase beyond, that has been literally squeezed to fit into a narrow space.

To check the architect’s intentions let’s see what the alternative would have been if there was no extension in Room 3 and if the northern wall of the room (an important load bearing wall) extended properly all the way to the corner: Room 5, the room with the wall paintings, would have been entered at the corner, whereas now it is entered at the centre (fig. 3). The latter is quite strange, for the rule in Cretan and Theran architecture is for doors to be placed at the end of the wall, that is by the corner of the room. So why did the architect go against all logic, both structural and architectural?

The answer, I believe, lies in the peculiarities of the painted Room 5 and the clear intention to give the room a central entrance. Again a comparison between the two options as presented above might be helpful. Room 5 has a very strong architectural feature: centrality. It is a square room with openings arranged along a grid of 5 x 5 units, and a paved floor that also emphasizes the centre. Such an architectural space evokes powerful centripetal forces: Only a central access point can hold these forces together. The other alternative, a door at the corner of the room, would have introduced the incomer sideways leaving him with a feeling of by-passing the centre. The sensation might be of moving along a tangent that forces one out of the circuit or of missing the target altogether. A corner door would simply have cancelled the very essence of this room, its centrality. It is clear to my understanding that the displacement of the wall in Room 3 was intended to provide space for entering Room 5 centrally, and this is further emphasized by the fact that the

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2 See especially Michailidou 1987.
3 For the Theran wall paintings see Doumas 1992.
beautiful stone pavement of Room 5 spreads out into Room 3 appropriating the small extension which functions as a preparatory space or forehall (fig. 1).

Entrance to Room 5, therefore, is directed to its centre at which point the verticality of the body defines a horizon at eye level, approximately 1.50 m above the floor (fig. 4). A person standing in the middle of the room is invited to gaze around as in a panorama. The eye is first captured by the light coming from the windows facing the entrance door (west) and is mobilized towards the right side (north) by the continuation of the windows on the other wall (fig. 2). The wall paintings imply the same movement: The first painting one sees on entering the room is a Fisherman moving to the right, in a clockwise direction. The frieze above the windows (not preserved) would also have followed the same direction (this is indicated by the overall direction of the frieze)\(^5\). The engagement of the beholder is further enhanced by the easy (more or less even) eye contact with the Fisherman. The clockwise movement of the gaze is continued till the second Fisherman is reached where it momentarily stops because his body posture and his gaze change direction and send the viewer backwards. At this point one might perceive the two Fishermen and the bright light in between them as a separate entity in its own right, as opposed to the dark other half of the room. The roundabout movement seems indeed to have been cancelled. But is it so? For me, the two Fishermen actually emphasize the centrality of the room. Their lateral depiction in profile should not be read literally as pointing to the corner of the room but as intended to show them facing each other: They are actually moving out of the walls and into the room towards its centre. One might even imagine that they are reaching out to the person standing there offering him their fish (fig. 5).

To judge the effect of the two Fishermen, we can work with the alternative option once again: If the second Fisherman had been painted facing to the right, then the circular movement would have been reinforced, perhaps overwhelming so, at the expense of the centrality and the equilibrium of the overall composition (fig. 6). The two men would have seemed almost chasing each other in a perpetual circular movement. To conclude: In the West House, we have clear evidence of the architect giving priority in his design to the aesthetic values of architectural space; the same values that the artist enhanced through his own work. Architect and artist had a common goal in mind and one may even envisage them together, over a cup of Theran wine, discussing their intentions ahead, long before construction had begun.

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\(^5\) For the miniature frieze see Morgan 1988 and Televantou 1994.
Fig. 5  West House: the two Fishermen are perceived as coming out of the walls towards each other or towards someone standing at the centre of Room 5.

Fig. 6  West House, Room 5: both Fishermen looking in the same direction (alternative posture of the Fisherman to the right).
Xeste 3, Room 3, upper floor

This building differs from the West House in several ways. It is clearly a building of special (public?) functions, as opposed to the typical house that the West House represents\(^6\). Xeste 3 is a very large building, with three stories, numerous rooms and an astonishing number of wall paintings (fig. 7). It seems that apart from some rooms to the west which had an auxiliary function, all other rooms in all three stories were richly decorated with wall paintings. Another major characteristic of Xeste 3 is that it has many pier-and-door partitions in all three storeys. Space articulation and intercommunication, combined with a colorful pictorial background and a rich interplay of light effects, are thus raised to a highly sophisticated level.

The building is far too large and complex to be discussed here in its totality, both in terms of the various ways one can move through it and the thematic narratives of the wall paintings that follow one’s footsteps\(^7\). We shall therefore go straight to the upper floor, to Room 3a, and focus on just two of its walls, the eastern and the northern, where the final scenes of the theme of the Crocus Gatherers are depicted. These correspond to a narration that starts at the ground floor and ends here in the culminating scene of the offering of crocuses to the Goddess.

Room 3a–b is a composite space-unit: Three pier-and-door partitions and a thin partition wall made of mud bricks divide the space into a corridor, a main area (Room 3) and an L-shaped space flanking it (Rooms 3a and 3b). Access to this unit is either from the south through a pier-and-door partition, coming from the main staircase (and the entrance to the building) or via the corridor coming from the inner rooms of the building to the west\(^8\) (fig. 7). An auxiliary staircase at the end of the corridor relates this space-unit directly to a similar unit at ground floor level which in addition includes a Lustral Basin.

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\(^6\) For a general description of the building see Palyvou 2005, 54–62.
\(^7\) For an overall presentation and discussion of wall paintings of Xeste 3 see Vlachopoulos 2008.
\(^8\) As for the general perception of the wall paintings in this part of the building, this is too broad a subject to discuss here. The presence of so many pier-and-door partitions seems to complicate things. See Paliou et al. 2011 on the issue of visibility.
Fig. 8  Xeste 3, first floor: the wall painting of the Crocus Gatherers (eastern wall) and the focal element of the composition (mountain and crocuses) at its centre.

Fig. 9  Xeste 3, Room 9: wall painting with rosettes.
Room 3 is a squarish space that acts as a place of ‘arrest’, a place to contemplate and perceive the whole unit before taking the next step. Centrality is a strong element here as well, and the effect of the pierced borders of this space (pier-and-door partitions on three sides) combined with the partial view of the wall paintings beyond and the light coming through the windows would have been overwhelming!

Not unlike the ambience in Room 5 of the West House, both the architecture and the wall paintings of this space activate a rotation movement that starts with the female figures on the eastern wall of Room 3 and continues in a counter-clockwise direction. The ladies on the eastern wall invite one to proceed ahead, crossing the pier-and-door partition as walking through a screen. Having crossed the ‘mutable barrier’ that is the pier-and-door partition, one is halted to an arrest once again. Beyond lies a stunning composition that captures one’s attention immediately: the large culminating scene with the seated Goddess. Yet, one is also immediately aware that the scene is not confined to one wall: It wraps around the beholder in a manner emphasizing all three dimensions of space, as we shall see below.

The girls depicted on the wall to the right are on the move, climbing up a mountain picking crocus flowers. They thus set the whole scene in motion, leading the beholder masterfully through illusionary space as much as real space. Let’s yield then to their call and follow their path, and, in doing so, observe how the artist has manipulated our response to this illusionary space.

The eastern wall depicts two young women on a mountain plucking crocuses. This wall painting appears in most publications as an autonomous painting in its own right\(^9\) (fig. 8). Indeed, it has all the attributes and the merits of a self-contained finished painting that can stand on its own. At the same time, however, it is an integral part of the overall scene that spreads over all the other walls as well. This dual performance – also attested in other wall paintings at Akrotiri (for example the Fishermen, the Boxing Boys and the Antelopes) – is a significant artistic attainment in its own right. But how is it achieved?

A careful look at this wall painting reveals certain simple codes for organizing the theme on the wall surface, which enhance the visuality of the picture and facilitate the reading of its meaning. As we shall see, these codes seem to be standard procedure for most paintings. A starting point of reference for organizing the blank surface of the wall is its centre. This is easily defined by simply ‘drawing’ the two diagonals of the wall surface and marking their crossing point (two strings held tight momentarily suffice for this); a vertical and a horizontal line passing through this centre are further guidelines for the composition (fig. 8). This is attested at Xeste 3 on both walls we are dealing with here, but a casual test on other wall paintings seems also to confirm it, as, for example, in the wall painting of Room 9 depicting rosettes set within a network of white bands in relief\(^10\) (fig. 9): The diagonal lines that form the net are parallel to the basic diagonals and the centre of the wall is the starting point for the whole composition (see also the rare instance of perspective in the knots flanking the central axis).

\(^9\) Doumas 1992, 152, fig. 116.
\(^10\) Doumas 1992, 174, fig. 136.
The same is true in the Antelopes (fig. 10): The centre of the composition defines the overlapping of the two animals and the axes of their bodies. In the Boxing Children (fig. 11) the vertical line separates the domains of the two figures and defines the point where their outstretched arms cross while the horizontal line corresponds to the centres of their bodies. The boy to the right is actually bending his body forcefully forward in a way that seems to have been dictated by the very diagonals of the composition11.

In the wall painting with the two Crocus Gatherers we are dealing with here, the centre of the wall is indeed the main point of reference of the whole scene, both literally and symbolically: The artist seems to have begun his work by placing at the centre the focal element of the whole composition, a mountain crop with crocus plants growing on it (fig. 8). Once the centre has been set, two guidelines both passing through this centre are activated: one horizontal and the other perpendicular. The former separates the ground from the sky (or some other binary situation in other instances, such as the rosettes in Room 9) whereas the latter acts as a magnet that keeps together the composition and helps read the picture as a self-contained autonomous entity. It also acts as an axis for symmetry (albeit latent), yet another element that favours internal equilibrium and autonomy.

Next, the artist resorts to body posture and gaze and archetypal binaries, such as up and down, in front and behind. Body posture in this wall painting is most telling: Both girls move to the left and upwards, their bodies leaning accordingly (fig. 12). This strong directional movement suggests anticipation for things happening to the left of the picture, beyond the wall painting in question (which is indeed the case). In other words, a first link outside the picture is established. On the other hand, the fact that the girl to the left has twisted the upper part of her body backwards so as to confront the girl behind her activates symmetry in relation to the perpendicular line referred to above and enhances the reading of the picture as a complete, self-referential composition.

The gaze of the two girls is yet another tool that the artist is using skilfully: The younger girl to the right (her hair is completely shaven) is looking to the left and upwards, emphasizing the directional movement of the whole composition but also implying difference of status with the higher and older girl (she has growing curly hair). The older girl looks back to her, emphasizing this time the internal equilibrium.

Predisposed for action to be continued to the left, the beholder now follows the directional line of the body postures only to find that it ends at the corner of the room. The anticipated continuation however is there, on the next wall around the corner, where there is yet another girl walking on the same colorful mountain (fig. 12). Ignoring the corner provocatively is a popular technique in Theran wall paintings (see for example the Spring Fresco): It evokes a feeling of space wrapping up around the beholder and Therans would have been acquainted with it12. This young woman is clearly ready to start her descent: Her basket is now full with flowers and placed on her shoulder while her upright body posture shows that movement has come to a halt; she is literally pausing momentarily before taking the first step downwards. Above all, however, it is her gaze that strongly suggests change for she is firmly looking down, ready to start her descent visualizing or actually seeing the valley below.

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11 This is an interesting topic of research in progress: it might even prove helpful in anticipating the missing parts of some wall paintings, such as those in the House of the Ladies, by following the diagonals depicted on the wall painting.

12 Palyvou 2000.
This valley is depicted in the next part of the wall, but there is a window in between creating a substantial gap in the picture! It is truly amazing to observe at this point how the artist treated this gap: Not only was he not intimidated by this invasive architectural element, but he found a way of using it to the benefit of his composition: The ‘gap’ acts as an intermediary, as a passage or a link between the events taking place on the mountain and those below in the valley, as if time and space have been condensed in this gap or as if the window acts as a change of paragraph in the text of the narration.

The beholder is thus ready to proceed to the next, and final, scene: He has reached the destination point of a thematic narration that started at ground floor level, around the Lustral Basin, went up the staircase, through the corridor and Room 3 to end here. This large composition represents the most important event of the whole narration, the offering of the crocuses to the Goddess and the blessing that comes with her acceptance (fig. 13). The scene takes place on flat ground, a valley spread with crocus plants (depicted in the cavalier perspective). It involves two female figures, one human, the other a deity, and two animals, one real and the other mythical. It also involves an impressive stepped structure.

How is one to read this picture? The basic concept of the centre and the two lines passing through it – one horizontal, the other vertical – as the main elements of reference will help us get started, for they are very effective in this case. The centre of the plane is the epicentre of the composition: The artist has placed here the focal event of the whole narration, the act of the offering. A handful of crocuses held in the hand of the monkey – the intermediary – are presented to the deity who is picking a few with her fingertips, thus accepting the offering and affirming the ritual.

The horizontal line defines the two areas of action, the mundane, factitious world below and the sublime or divine above (the monkey is barely surfing above this line). The artist made sure that the human figure to the left does not raise its head above this line. The same more or less applies to the perpendicular line that clearly divides the sacred from the profane.

Reading the picture from bottom up one observes that the lower part has no landscape elements; it is a tripartite structure standing firmly on flat ground, which can practically be identified with the floor of the room itself (fig. 14). The stepped platform and all that happens upon it is therefore brought into the foreground, while nature is read as the background. The platform appears almost as if coming out from the wall into the room, linking real space to the illusionary beyond.
The stepped tripartite platform has been discussed in detail elsewhere\(^\text{13}\): In summary, it is seen to represent a temporary construction made of prefabricated elements that are carried to the spot and assembled in situ (figs. 15, 16). It consists of standardized elements of wood and stone that are mounted together so as to create the stepped platform and are dismantled after the ritual is over, then carried away and stowed for another occasion: That occasion will occur soon, because ritual acts are formal and repetitive.

Timber elements, beams and planks, clearly identified by their color and the grain of the wood, are set longitudinally and transversely and are supported by stone bases in the well-known form of the so-called ‘incurved altar’. There are many depictions of such bases in art, but we also know a set of four real examples found in situ at Archanes\(^\text{14}\) (fig. 15). The latter are of special importance, for they were found placed tightly next to one another forming a broad square base or table.

I cannot overemphasize the ingenuity of these stone artifacts: They are absolutely symmetrical and finely dressed so as to fit alongside one another perfectly. Their ingenious symmetrical curvilinear form – quite difficult to design and to execute – allows for many different combinations. They perform, in other words, as ‘modular units’ that can be used in many ways and on many occasions related to rituals: as a single base/altar (a common depiction in art), as a seat for a divine figure or a priestess, and in rows as supports for the tripartite platform. The very idea of standardization and prefabrication is an advanced technological concept and remarkable in itself, especially since we think of the Bronze Age as an era of ‘approximation’; true though this may be, it is clearly a matter of preference for a-symmetry (or eu-metry) rather than incompetence.

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\(^\text{13}\) Palyvou 2006.

\(^\text{14}\) Shaw 1986; Sakellarakis and Sapouna-Sakellaraki 1991, 30–32, fig. 16. See also Marinatos 2010, 136–38, for a different reading of this object.
The platform on the wall painting is shown in profile or, in architectural terms, in ‘elevation’ – an advanced design tool for representing three-dimensional objects on a two-dimensional plane. To mantle the platform, first, the bases are placed in position in rows on carefully levelled ground (fig. 16). On top of the bases wooden beams are placed in such a way as to bridge the gaps, positioned in alternating directions for the better stability and rigidity of the structure. Wooden boards or beams are then placed one next to the other to form the floor, probably held together by means of ropes or tenons and mortises. Timber blocks are used as supports for the higher platforms. It may be assumed that the three platforms diminish in width as they do in length (the dimension visible on the wall painting). This corresponds to their use, the highest being the smallest and exclusive to the Goddess. The three levels of the platform, as noted by N. Marinatos, are levels of hierarchy from the mundane to the divine, the intermediate level being precisely that.\footnote{Marinatos 1984, 61–84.}

To use Groenewegen-Frankfort’s words, the picture displays ‘absolute mobility’\footnote{Groenewegen-Frankfort 1972.}: All the figures are tiptoeing, captured at the very moment of transition from one situation to another. Body posture, gesture and eye contact are also indicative of this mobility (fig. 14). The young woman to the left stands firmly on the lower level, one leg slightly tiptoeing towards her basket and symbolically towards the deity. The monkey is standing on the lower, human/real level and just touching the intermediate (his body posture does not imply intention to actually move towards the upper level, he is merely activating contact and communication), whereas the Goddess is sitting on the highest level and also touching (making contact with) the intermediate level.
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The griffin behind (or next to) the Goddess is not entirely preserved but its dynamic posture with the wings fully open and the front legs in the air seem to indicate that it is lingering in mid-air rather than standing on the intermediate level as the graphic reconstruction of the fresco suggests.

The picture can be also read in terms of corporal proximity: The human figure stands alone at some distance, the monkey comes closer to the deity, while the griffin is almost touching the goddess, almost… Eye contact and gaze is another theme to bear in mind when ‘reading’ the picture (fig. 14): There is a line of eye-to-eye relationship starting from the young woman, passing through the monkey, and reaching out to the griffin, which, rather passively and unaware of this gaze, passes it on to the Goddess. This is a vague, mental relationship rather than true eye contact. The girl is bending her body downwards to reach the broad basket by her feet while painfully turning her head up towards the goddess to accept her benevolent gaze rather than to look at her. The monkey’s gaze, caught in the middle of this human/divine communication, is absolutely focused on the hands, the act of offering.

The act of offering at the very centre of the composition is further emphasised by the directional movement of the two hands: The monkey, the agent, is merely presenting the offering with his arm close to his stiff body and only the hand outstretched, whereas it is the Goddess who takes action and accepts the offer, her arm emphatically (out of proportion) outstretched to reach the crocuses.

**Fig. 15** ‘Incurved altars’ made of stone from Archanes (above; photo by author) and depicted in art (below; seal images after CMS I, nos. 46, 98; II.3, no. 7; ivory lid from Minet el-Beida after Aruz et al. 2008, 408, fig.).

**Fig. 16** Conjectural drawing of the stone and timber elements mantled together to create an ephemeral platform (computer drawing by A. Kassios, architect).
Yet another way of looking at the picture is in the different ways the tripartite arrangement is activated: Two female figures, one human and the other divine, communicate through an animal agent, the monkey; two animals, one real and the other imaginary, serve the Goddess, one as the agent of the world of the humans, the other as the guardian and agent of the world of the gods.

Last but not least, there are two points of special interest in this composition, relating the illusionary space to real space. They may be revealing as to the meaning of both the architecture and the wall paintings of this space unit. A first point is the red leash tied around the neck of the griffin, extending upwards and ending in a knot (fig. 17). Griffins tied to architectural elements, commonly columns, are depicted in several works of art. In these cases the column is understood as an emblematic representation of palace or elite architecture and therefore of royal or elite power. By tying the griffin to the column, the attributes of the griffin are transferred to the royal/religious power that this architectural element represents while at the same time the griffin is secured against flying away.

What is both strange and fascinating in this wall painting, however, is that the leash is tied to the real post of the nearby window! Not to a column or any other architectural element within the same illusionary space as the griffin but to a window outside this space, belonging to the real world! The only way I can understand this symbolic correlation is that the illusionary space depicted on the wall is meant to be read in absolute connection with the real space of Xeste 3. The fact that the tripartite platform is painted as if standing on the floor of the room is another means to this end. The scene of the offering of crocuses in the countryside then was probably meant to be understood in conjunction with relevant scenes actually taking place within Xeste 3. The platform in particular may have functioned as the link between the city, the countryside and the domain of the gods: It is a man-made artefact imposed on nature that provides isolation from the ground and elevation towards the heavenly domain.

I would suggest therefore that we are witnessing the merging of the pictorial and the real, as a symbolic statement of the strong and inextricable relationship between the countryside and the town. The narrative of the wall paintings has brought the women back home to their urban environment (the urban effect is even more patent if one ignores for a moment the crocuses on the background, the only element that alludes to

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**Fig. 17** The culminating scene with the Goddess: note the red leash tied around the neck of the griffin and ending in a knot by the window post. Similar scenes of griffins tied to columns are depicted in art (seal image after CMS I, no. 98; Goddess and griffin from Xeste 3 after Doumas 1992, 159, fig. 122; griffin relief from Knossos, Heraklion Museum).
countryside). These are, after all, city girls invading the countryside, as many have observed, all dressed up for the occasion. And the occasion is a rite de passage that involves peregrination in the countryside, where the girls are tested before returning to the city for the final stage of the ritual.

A further observation is the directional treatment of this composition: The girl to the right side of the window, who is about to begin her descent from the mountain, looks as if she will be approaching the Goddess from behind, a very inappropriate attitude indeed (fig. 7). It is well known, however, that in Aegean art the profile depiction corresponds to a variety of real positions. The key in this painting is the young woman at the far end of the picture to the left: She is looking to the right, confronting the descending girl, while in between the two is the Goddess. This confrontation (reminiscent of the two Fishermen) implies that their focus is somewhere in between them: In this case, it is the seated Goddess, which is clearly meant to be perceived as frontal. Again, a test of the alternative situation would be helpful: Had the main composition been presented the other way round, the procession of the girls would have seemed more natural, ending at the stepped platform (fig. 18). But there would have been several points of concern: First, the movement would have ended abruptly with no clear indication of a ‘pause’ or an arrest prior to the offering; the emphasis would actually have been on the linear procession as such, instead of on an event taking place ‘around’ the platform; and most important, the Goddess would have had no space behind her, no ‘air’ appropriate to her status, as if she was literally cornered at one end of the composition. The decision to arrange the synthesis the way we see it was surely a conscious and well judged one. The effect is indeed impressive for it ‘rounds up’ the theme and makes the beholder standing in the room feel somewhat involved in the whole scene. Beyond the main scene, to the left, another even larger window mediates to interrupt the narration and a new theme builds up its own space.

**Fig. 18** The culminating scene with the Goddess: the effect is that of ‘surroundedness’, with the Goddess envisaged in a central and frontal position. An alternative arrangement (right) would have resulted in a linear procession of women moving towards the Goddess. See comparable depictions in art (after CMS II.7, no. 8; II.8, no. 268; V, no. 199; V Suppl. 1A, nos. 175, 177; V Suppl. 1B, no. 195).

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17 Marinatos 1984; Morgan 1990, 261–62; Doumas 1992, 130–31. Tzachili (2005, 113) also points out the aspect of ‘time’ in these scenes: time is circular, and there is a perception of before and after, that is of time present, past, and future.
18 There may be, however, a further symbolism in the direction of the bodies for it seems to be typical for the Goddess to be looking to the left.
19 See Vlachopoulos 2008.
On a final note, we should always keep in mind the gaze of the beholder (fig. 12). His/her eye horizon cuts through the two walls allowing him/her to relate to the depicted figures accordingly: He/she relates easily with the three young women who, judging from their growing hair, have recently passed the initiation rites of adulthood. The younger girl on the eastern wall is at a considerably lower level of eye contact while the Goddess is much higher, as is to be expected. Note also that although the artist deals with a strongly undulating land, from the mountain top all the way down to the valley, he manages to keep the eye horizons of all figures involved in a reasonable interrelation: Thus, the girl who is about to descend after having reached the highest point of the mountain is slightly higher than the one behind her, while all the eye horizons of the human figures remain lower than the one of the Goddess. For this to happen the descending girl and the girl emptying her basket have been shortened (size manipulation is another well-known tool for handling space articulation and hierarchy).

**Conclusion**

The above case studies show beyond any doubt that there are indeed *intentions* in the way architectural space and pictorial space are interrelated, which seem to converge on one main goal: to diminish or even eliminate the two-dimensional character of a wall painting by merging it with the three-dimensional real world. There is also clear intention to involve the beholder actively: The beholder is the link between the two worlds, the factitious tangible world of sticks and stones and the imaginary world the artist has created. It is the human body and the way it moves through space that guides both the architect and the artist in manipulating how space should be perceived. The effect in both cases is that of ‘surroundedness’, as Groenewegen-Frankfort would have described it, and of illusionary space being distinct as such while at the same time being integrated into the architectural ambience of the room. It is this dual performance that the artist and the architect strive to achieve through their combined work. As for the theme represented, the artist uses a simple yet effective set of tools to facilitate its readability: In the case of Xeste 3, the theme could be epitomized by reading the two centres of the adjacent walls in the order implied by their direction: the *focal element* is saffron growing on the mountain and the *focal event* is the offering of saffron to the Goddess after it has been plucked. The rest of the story revolves around the two centres: The task is performed by young women whose actions emphasize the perpetual cycle of moving out to the countryside and back again to the urban environment of their town, thus emphasizing the close bond and interdependence between the two.
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‘Open Day Gallery’ or ‘Private Collections’?

An Insight on Neopalatial Wall Paintings in their Spatial Context*

Quentin Letesson

As L. Morgan once pointed out: “The temptation on discovering wall paintings in private houses is to project anachronistic ideas of the secularity of the art of domestic spaces”1. In a similar vein, one has to acknowledge the anachronistic tone of the title of this paper. In fact, it is problematic in more than one way. First of all, terms like ‘gallery’ and ‘collections’ have obvious secular connotations and no one has to be reminded that Minoan frescoes were often – and sometimes quite convincingly – associated with ritual concerns and practices2. Moreover, ‘open day’ and ‘private’ are contemporary notions and nothing would be more erroneous and misleading than to apply them blindly to the distant past of the Neopalatial period.

Nevertheless, this slightly provocative title draws attention to one of the main concerns of this paper: space, its accessibility and the control exerted upon it. Even if – as C. Palyvou underlined – “the terms ‘private’ and ‘public’ are […] deeply imbued with notions that are time and culture specific”3, the Neopalatial period witnesses a considerable rise in the attempt to create spatial contexts allowing both community and privacy to take place within a segmented, categorized and probably tightly controlled architectural framework4. In a nutshell, the rooms where mural paintings were found are not specifically the main concern of this paper. Instead, we will be focusing on the way these rooms are integrated within the whole architectural complex of which they are part.

Before turning our attention to some specific spatial properties of the rooms decorated with wall paintings, some general remarks concerning their architectural context are necessary. First and foremost, in terms of distribution within buildings, F. Blakolmer has pointed out that there was a shift between the Proto- and Neopalatial periods5. During the former, as in the Prepalatial period, mural paintings essentially testified to the hierarchical position of a building within a settlement and therefore of its occupants in a community. They were not directly linked to the function of the space they adorned in the sense that, generally, they are found throughout a building, in many types of rooms. At the end of the Protopalatial period, starting with Quartier Mu at Malia, things began to change and, in the Neopalatial period, mural paintings are mainly but not exclusively encountered in spaces often labeled as ceremonial (pillar crypts, lustral basins, some halls with polythyra, etc.)6. Again according to Blakolmer, painted decoration thus evolved from a way to communicate social status to an indicator of the new ‘palatial’ ideology closely associated with ceremonial and ritual activities7. Mural paintings remained a way to manifest prestige and/or social integration, but within a broader framework of socio-economic emulation where palatial institutions and ceremonial practices were influential. It is also well known that some frescoes or areas of painted wall decoration may have served as sign-posts placed at strategic points of the circulation system (corridors, porticoes, staircases) to lead visitors through the buildings and accentuate their legibility8. To conclude on the architectural context of mural decoration, it is very important to keep in mind that – as put forward recently by Palyvou – “wall paintings are enhanced and at the same time restricted by architectural space, and they are experienced not in their

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2 E.g. Marinatos 1984; Kontorli-Papadopoulou 1996; Blakolmer 2000; see also various contributions in this volume.
3 Palyvou 2004, 207.
4 Letesson 2009.
7 Blakolmer 2010, 149–50.
own right (regardless of the context), but as part of the experience of being within a building”. Furthermore, it seems quite obvious that this new character of Neopalatial mural paintings is concomitant and intimately linked to the architectural style that became in vogue throughout the island of Crete and had repercussions miles away from its shores. So, let us now consider some of the main features of this Neopalatial architectural landscape, especially where its spatial syntax is concerned.

Space syntax is an analytical method which translates a standard architectural plan into a specific graph which allows a qualitative and quantitative approach to spatial configuration. This methodology can be applied to any architectural structure that is sufficiently preserved and has the potential to highlight spatial characteristics which would otherwise remain less obvious or even hidden. In recent years, numerous journal articles, papers and communications testify to the growing interest for this analytical methodology in archaeological research. In terms of interpretation, space syntax theory considers that the properties of a graph result from cultural prescriptions (unconscious or deliberate), the aim of which is to create an adequate framework to the relationships between two categories of potential users of the built environment – residents and visitors – and to materialize and organize zones of activity in a building. ‘Residents’ are those whose identity as individuals is embedded in the spatial layout of a building and who therefore have some degree of control of space and a privileged access to it. ‘Visitors’, on the other hand, are those who lack control over a particular building. Their access to space is usually temporary and subordinated to control by the residents, and their social identity generally manifests itself collectively.

Studying Neopalatial architecture through space syntax underlines a large number of topological recurrences. This means that there is repetition among the different buildings not only of the way spatial layout is organized, but also how the outside and the inside of a building relate, that the choices for potential circulation networks recur and that certain types of rooms or transitional spaces are characterized by a structural redundancy, impossible to distinguish by a simple visual inspection of standard plans. These features are so often repeated amongst Minoan buildings that they allow us to recognize a genotype – an underlying set of principles – that permeates the Minoan built environment forming a continuum between houses and palaces. Nevertheless, the existence of such a model does not exclude variations. These can be contextual and linked, for example, to climate, topography, available materials, technological skills, economic resources, specific function, cultural conventions and so on. Furthermore, domestic buildings tend to provide a looser expression of the genotype in comparison to official and/or communal buildings. The latter need to provide clear clues for their various users and therefore to offer a neat crystallization of social knowledge. Before considering the architectural context of the selected wall paintings, some of the main features of this Neopalatial architectural genotype require a more thorough explanation.

Most of the Neopalatial buildings have one or more areas which may be termed ‘external transition spaces’, that is to say a space – such as a vestibule, a corridor, etc. – forming a kind of liminal zone between the exterior world and the internal arrangement of the buildings. A transition space has a dual nature: it can generate accessibility and contributes to establishing a spatial connection but, at the same time, it has the potential to divide space, separating activities and/or people. Often, one of these elementary functions is more developed than the other, e.g. a vestibule allows access to a building but its main feature is to create a clearer boundary between inside and outside. A corridor, an internal transition space, however, forms a limit between several rooms and its main function is to ensure the efficiency of the circulation between them. The considerable use of external transition space in Neopalatial architecture suggests a growing concern about undesirable intrusions. This may not only imply an attempt to reduce the permeability of the building, but also acts as an

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9 Palyvou 2005, 161; see also Immerwahr 2000, 488.
10 Driessen 1989–90.
12 Hillier and Hanson 1984; Hillier 1996; Hanson 1998.
13 See amongst others: Bonanno et al. 1990; Cunningham 2001; Cutting 2003; 2006; Fisher 2009; Foster 1989; Romanou 2007; Thaler 2005.
15 Letesson 2009.
16 This concept is rather similar to Palyvou’s Aegean House Model and its idiomatic variations; see Palyvou 2005, 170.
17 Hanson 1998, 285.
efficient signal, a way of underlining the shift from the external world to the internal domain. Thus, even if the Minoan ‘vestibule’ does not show the same formal regularity as at Akrotiri on Thera, it is nonetheless a basic component of the Neopalatial built environment. Moreover, in terms of form, external transition spaces often create a bent-axis approach (dog’s leg corridor/vestibule). Such an approach tends to constrain movement and thus contributes to reinforce the efficiency of the external transition space. The very existence of such external transition spaces underlines the fact that the contacts between the inside and outside of Minoan buildings were potentially so frequent and/or necessary that they needed to be tightly monitored. Indeed, they suggest frequent, planned encounters that formed integral parts of the social dynamics, tightly controlled and channeled through space. Add to this that Neopalatial buildings often had more than one entrance and most of them were in fact either preceded or followed by external spaces of transition (porches, vestibules, corridors, etc.), then the indications that different categories of visitors frequented the interior of structures become even more persuasive.

Such transitional spaces often lead to a room with an extremely high level of integration. Such a room is closely connected to all the other spaces of a building (as well as generally with the exterior). In other words, from this room, any other space of a building can be reached directly or without having to cross too many intermediary spaces. Generally, such rooms also present a high visual controllability, meaning that they may be easily visually dominated, or kept under surveillance. These spaces mostly form the very core of the buildings in which they are found. They articulate movement towards the other rooms and offer a particularly well adapted framework for encounters among residents and the hosting of ‘visitors’. Such spaces are labeled ‘poles of convergence’, partly because most of the trajectories that crisscross a building have to pass through them. This could imply that they represent rooms to which people (or a selection of specific people) had equal access and equal rights. They were spaces fit for local interactions depending on spatial proximity, such as a communal meal, a particular ritual performance, or the hosting of visitors. In Minoan studies, such ‘poles of convergence’ have usually been labeled as hosting/reception zones or more simply as the ‘functional center’ of a building. From a syntactical point of view, their essential feature is that they formed the main internal arena for encounters and co-presence in Neopalatial architecture. This becomes the more evident when comparing them with other spaces that were not accessible for all the members of the residential group and obviously even less for potential visitors, or with spaces that were more closely associated with particular activities to the exclusion of others, such as storerooms, workshops, etc. In terms of space syntax analysis, the latter usually develop themselves in tree-like and linear arrangements, a type of spatial configuration which easily frames, distinguishes and articulates circulations and categories of people and activities in a pattern of avoidance or controlled encounter. Some of these rooms also have recurrent topological properties but listing them would take us too far from the scope of this paper18.

To sum up, it is possible to argue that in Pre- and Protopalatial Crete, buildings mostly followed an agglutinative configuration whereas in Neopalatial Crete the widespread introduction of internal spaces of transition created articulated plans that categorized people and their activities more strictly and efficiently. The articulation resulted in a spatial segmentation which is often considered as concomitant with socio-political complexity, related to age, gender, status or other differentiations. It is the socio-political complexity which dictated the architectural arrangement and the architectural arrangement which reciprocally materialized, perpetuated and intensified the socio-political complexity.

Some preliminary remarks are also necessary before focusing on the architectural settings of the selected Neopalatial wall paintings. First of all, this analysis was not conducted on all Neopalatial extant remains. Space syntax demands a sufficiently well preserved plan to work properly. Therefore it was not possible to take into consideration some heavily destroyed or architecturally confusing buildings despite the presence of famous mural paintings, as for example the Villa of the Lilies at Amnisos19, Hagia Triada20 or – more unfortunate even – the palace at Knossos21. Furthermore, some stucco decoration – as that found in buildings B and C at Tylissos – was rejected because its location is barely known or too imprecise22. Secondly, the selected

22 Hazzidakis 1934, 30–31 and 35.
wall paintings were classified in four broad categories: figurative in situ (in red on the illustrations), figurative fallen from upper floor (in orange), non-figurative in situ (in blue) and non-figurative fallen from upper floor (in green) (table 1). The non-figurative category mostly comprises monochrome stucco, marbling and dado decoration as well as geometric and stylized patterns. In the case of wall paintings fallen from the upper floor, a hypothetical reconstruction of the first storey is proposed and its connections with the ground floor materialized in the j-graph. In total, 32 decorated rooms are taken into account in this study (table 2). Although only wall decoration is considered, it is worth noting that painted plaster decoration was also intensively used on floors (usually between slabs or forming ‘Strip Designs’).

To highlight the configurational properties of the rooms decorated with wall paintings in order to delineate some recurrent patterns, we will proceed from the more elementary syntactical features to the more complex topological notions.

First of all, it is interesting to note that more or less 70% (22 out of 32) of the rooms adorned with mural paintings have a depth value (i.e. the number of spaces that one has to cross to reach the room from the exterior) that is superior to the mean depth (i.e. the addition of all the individual depths divided by the total number of spaces) of their building (table 2). Of the remaining 30%, the majority have a depth value that is quite close to the mean depth. There are only two instances where a decorated room is immediately accessible from the exterior world: the Unexplored Mansion with the upper floor of corridor L (fig. 7) and vestibule 1 in Building 5 at Palaikastro (fig. 13). Furthermore, in the former, the plan of the second floor is hypothetical and based on some comments made by Popham24. So, of the selected examples, it appears that there is a relatively clear tendency to decorate rooms that are situated in a rather remote location from the exterior.

In space syntax theory, the spaces forming a graph can also be divided in four broad categories according to their spatial connections25 (see fig. 1). Labeled ‘topological types’ these categories have quite different potentials for occupation and movement within an architectural complex26. Spaces of type a are dead-ends: they have only one connection (link) with the rest of the graph. Topologically speaking they are more prone to be occupational spaces because they can only host movement to and from themselves. Spaces of type b are one way in/one way out linear spaces. They have more than one link with the rest of the graph. In a sub-complex of type b, movement from origins to destinations which necessarily pass through a b-type space must also return to the origin through the same space. Thus, such spaces have a potential to exert a strong control on the through movement they host. Spaces of type c are one way in/one way out ring-like spaces. They have more than one link and are part of a sub-complex of the graph in which there is exactly the same number of links as spaces, i.e. a ring or loop. Like b-type spaces, they raise the possibility of a through movement while constraining it to a specific sequence of spaces, though without the same requirement for the return journey. Spaces of type d are hubs, with multiple ways in and out. They have more than two links with the rest of the graph and are part of a sub-complex of the graph in which there is at least two rings with at least one space in common. They permit movement but with much less built-in control because there is always choice of routes in both direc-

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24 Popham 1984, 105.
tions. Of 32 decorated spaces, 14 are of type a (45%), 8 of type b (26%), 7 of type c (23%), 2 of type d (6%) and 1 of undefined type (3%). This shows that almost half of the selected spaces are purely occupational; 47% of the remaining spaces can host a through movement but this transitional potential is constrained in a linear (type b) or elementary ring-like (type c) sequence of spaces. There are only two examples – the upper floor of corridor L in the Unexplored Mansion at Knossos (fig. 7) and the central court at Phaistos with its decorated niches (fig. 11) – where wall paintings were found or reconstructed in type d spaces. As aforementioned, these cells are located on more than one ring (or loop) in the graph; they generally represent a hub of the circulation network within the building. Because they are characterized by multiple connections with the rest of the building, their basic architectural impact on the channeling of circulation is less straightforward than in spaces of type b or c. So it appears that, in these particular cases, when decorated rooms are not purely occupational spaces, they were part of a route that was potentially easily controlled through the fabric of the building. If these proportions are valid for the 32 selected examples, this hypothetical association between the type of a room and the presence or absence of wall decoration has to be tested statistically. Therefore, a chi-square test for independence was used and, unfortunately, came to the result that – for the selected buildings – there was no association between the two aforementioned variables. Nevertheless, a definitive answer about a hypothetical link may only be obtainable by taking all the data we have into account (i.e. all Neopalatial buildings and every single example of decorated room).

We may then consider the integration of these rooms. This quantitative value is the central concern of space syntax analysis. As mentioned, the integration value (or RRA – real relative asymmetry) corresponds to the degree of connectedness of a cell within its whole spatial complex. It gives an idea of how much this particular space is closely connected to all the other rooms or spaces of the building as well as with the exterior. A cell with a low numerical value (ex: 0.500) is an integrated space. Such a room is closely connected to all the other rooms of the building and the exterior; in practice, this implies that one does not need to cross many intermediary spaces to go from this particular room to any other room or the exterior. On the other hand, a cell with a high numerical value (ex: 1.500) is a segregated space. Such a room is rather remote from all the other rooms of the buildings and the exterior; from this space, one would need to follow a long and a potentially sinuous circulation route to reach most of the other rooms and the exterior. Space syntax and its topological view of architectural configuration can be reinforced using Depthmap. This software allows us to calculate some visual properties of the built environment and to map these with a color scale ranging from blue – low

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27 A chi-square test for independence is applied to the analysis of two categorical variables from a single population. It is used to determine whether there is a significant association between the two variables. For example, in an election survey, voters might be classified by gender (male or female) and voting preference (Democrat, Republican, or Independent). A chi-square test for independence could be used to determine whether gender is related to voting preference. Our test was based on the following contingency table, with a level of significance of 0.05 and a degree of freedom of 3.

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<tr>
<td>b</td>
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‘Open day Gallery’ or ‘Private Collections’?

Fig. 3 Gournia – Palace
value – to red – high value. One of these properties is visual integration. This concept is quite close to that of normal integration but it takes as its main referent the visual instead of the spatial connection\textsuperscript{30}. An area in red or close to red is highly visually connected and more central in the layout whereas a zone colored in blue or green has a low visual connection and is more peripheral in the layout (fig. 2). Of the 32 selected rooms (table 2), 22 (69\%) appear to be relatively segregated spaces. To be more precise, they have a numerical integration value that is higher than the mean integration value of the building they are part of. Furthermore, of the remaining 10 examples, only 4 rooms (12\%) can be labeled as highly integrated in their architectural

\textsuperscript{30} Turner 2004, 14–15.
‘Open day Gallery’ or ‘Private Collections’?

Fig. 5  Knossos – Little Palace
environment (with an integration value lower than 1,000). This is the case of – once again – the upper floor of corridor L in the Unexplored Mansion (0,634 – fig. 7), the large hall C in the palace of Gournia (0,908 – fig. 3), room 8 in the so-called Little Palace (Maison Epsilon) at Malia (0,913 – fig. 8) and the Banquet Hall in the palace of Zakros (0,880 – fig. 17). It thus seems that in most cases, rooms adorned with wall paintings were relatively isolated from the rest of the building and the exterior. In other words, they were not easily accessible from and tightly connected with other spaces of the same building. In a sense, these rooms may be considered as relatively peripheral in the architectural layout.

The last value that is taken into consideration is that of control\(^{31}\). Whereas integration is a global value calculated on the basis of the connection between one cell and the rest of the j-graph, control is a local value, concerning one cell and its neighboring spaces. A space with a high control value (2,000 and higher) is a

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\(^{31}\) Hillier and Hanson 1984, 109.
Fig. 7  Knossos – Unexplored Mansion
local hub in the circulation network; in practice, it means that this cell is directly connected to many other spaces that do not have many other direct connections. On the other hand, a space with low control value (1,000 and lower) has no real local impact on the neighboring circulation flow within the building. In other words, this type of cell is either a dead-end space or does not create a local link between many other cells. Again, Depthmap can be used to create visual maps ranging from red – areas with a high local visual control – to blue – areas with a low local visual control. 24 out of the 32 selected rooms (75%) have a quite low control value (table 2). Of the remaining rooms, 6 (19%) have a high control value (room T in the House of the Frescoes – fig. 4; room 8 in the Little Palace at Malia – fig. 8; vestibule 77 of the northern Minoan Hall and the central court of the Palace of Phaistos – fig. 11; room 5 in House B and vestibule 1 in Building 5 at Palaikastro – figs. 12 and 13) and only 2 (6%) show an extremely high potential of local control (upper floor of corridor L in the Unexplored Mansion – fig. 7 – and room 81 in the north wing of the palace of Phaistos – fig. 11). Thus, one can say that in most of these examples, decorated rooms were not playing a major role in the circulation flow directly linked with them.

Fig. 8 Malia – House Epsilon

‘Open day Gallery’ or ‘Private Collections’?

Fig. 9 Malia – Palace
Fig. 10  Nirou Chani
‘Open day Gallery’ or ‘Private Collections’?

Fig. 11 Phaistos – Palace
Finally we may mention that many of the 32 selected rooms also show a relatively pronounced visual controllability. This measure, also calculated through Depthmap, gives an idea of how easily an area can be visually dominated or kept under visual surveillance.

When all these recurrent properties are considered together, a coherent pattern emerges. In the Neopalatial period, rooms adorned with wall paintings are usually remote from the exterior. When they are not purely occupational spaces, they are usually situated on a circulation route that is potentially easily channeled and

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34 These illustrations are not included in this paper but can be consulted in Letesson 2009: Gournia Palace (fig. 364d); House of the Frescoes (fig. 81d); Little Palace (fig. 102d); South House (fig. 90d); Unexplored Mansion (fig. 113d); Malia House Epsilon (fig. 236d); Malia Palace (fig. 163d); Nírou Chani (fig. 143d); Phaistos Palace (fig. 270d); Palaikastro – B (fig. 473d); Palaikastro – 5 (fig. 452d); Pseira – BS/BV (fig. 600d); Tylissos – A (fig. 36e); Zakros Palace (fig. 510d).
‘Open day Gallery’ or ‘Private Collections’?

Fig. 13  Palaikastro – Building 5
controlled through the fabric of the building. Their implantation within their built environment gives them a segregated character in a sense that they are not especially easily accessible from and tightly connected with other spaces of the same complex as well as the exterior. Furthermore, the majority of these decorated rooms are not playing a major role in the circulation system surrounding them. Most of them tend to be easily visually dominated and kept under surveillance. It is worth noting that our data are probably biased – notably by the usually poor preservation of wall paintings – and have some unfortunate gaps. A clear pattern nonetheless comes out of the examples selected on the basis of the applicability of space syntax analysis and makes sense in the light of the Neopalatial architectural genotype.

If we now turn our attention to the functions of mural paintings evoked earlier, some remarks seem necessary. In our selection, there were very few transition spaces (vestibule 1 in Building 5 at Palaikastro – fig. 13, the upper floor of corridor L in the Unexplored Mansion – fig. 7, corridor XIX in the palace of Malia – fig. 9). The two first examples are clear variations of the model in various aspects but both are directly accessible from the exterior. The vestibule of Building 5 and the corridor at Malia were both simply decorated with bands of colored stucco; the upper floor of corridor L was adorned with floral subjects and red blobs on an

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35 As in the case of the syntactical features of the decorated rooms of the palace of Knossos, presumably the model for Neopalatial wall paintings elsewhere (Blakolmer 2010, 155).

36 Chapouthier and Joly 1936, 21–22, pl. IV.2; MacGillivray et al. 2000, 40.
Fig. 15  Pseira – ‘Plateia Building’ (BS/BV)

ochre background. In these cases, it is quite clear that the ‘sign-post’ function is the more relevant option. In the case of Building 5 and the Unexplored Mansion, the decoration served as a cue and probably enhanced the liminal function of the exterior transition space, signaling at the same time the specificity of the spaces following the latter. In the case of Building 5 where other painted decoration is almost absent, the need to distinguish vestibule 1 makes sense if one keeps in mind that this cell connected the small plateia and the room where the Palaikastro kouros was probably originally exhibited. In this case, it is also quite interesting to note that vestibule 1 is one of the few examples in Neopalatial architecture where an exterior transition space does not present a bent-axis, an architectural trick that usually reinforces the liminal power of such a cell. This straight-axis room may have permitted people to see the kouros from the plateia but was probably painted to appear as a clear limit between inside and outside as much as a sign-post to the ceremonial room that followed.

37 Popham 1984, 140–41 and 146–47.
38 MacGillivray et al. 2000, 94–96.
Neopalatial mural paintings were considered by Blakolmer to be an indicator of a new ‘palatial’ ideology closely associated with ceremonial and ritual activities as well as a way to manifest prestige and/or social integration\(^\text{39}\); of course these functions are not mutually exclusive. Blakolmer postulates that, in important buildings, mural paintings were focal points for communication between palatial authorities, their officials and visitors\(^\text{40}\). Whatever the various entities potentially gathered around such focal points comprised, some

\(^{39}\) Blakolmer 2010, 152.  
\(^{40}\) Blakolmer 2010, 155.
general remarks based on the configurational properties of the selected rooms are nonetheless relevant to the topic of Minoan social structure. In the majority of the 32 case studies, the rooms in which mural paintings were found or reconstructed were not particularly well adapted for the egalitarian gathering of different categories of people. If spatial solidarity, a term that defines egalitarian gathering in space syntax theory, was the main concern, it seems likely that the poles of convergence would have been the spaces chosen to be adorned with wall paintings. On the contrary, decorated spaces tend to have configurational properties that do not testify to an egalitarian use of space. They are generally relatively remote from the exterior world, segregated from the other spaces or areas of their buildings; even when they are not purely occupational, their access is easily controlled (through an elementary sequence of cells) and, finally, they have no real impact on the local circulation flow. All these characteristics point to transpatial solidarity, a spatial pattern that

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41 ‘Egalitarian’ in the sense of equal access to and rights over these spaces.
42 Hillier and Hanson 1984, 145: “[…] a spatial solidarity […] builds links with other members of the group not by analogy or isolation – as transpatial solidarity does – but by contiguity and encounter. […] Encounters have to be generated, not limited, and this implies the weakening of restrictions at and within the boundary. A spatial solidarity would be undermined, not strengthened, by isolation.”
Fig. 18  Akrotiri – West House
contributes to prevent uncontrolled and undesirable incursions through a recurrent mode of architectural segregation and personal categorization\(^\text{43}\). In other words, the activities that were performed with wall paintings as focal points were most likely exclusive and these rooms were only accessible to certain categories of people via a potentially tightly controlled circulation route. This implies that practices related to Neopalatial rooms with wall paintings as discussed here are coherent with the aforementioned architectural genotype and perfectly fit in the evolution from ‘free-for-all’ communal activities to standardized and segregated encounters and practices that we recently underlined as a shift from the Pre-/Proto- to the Neopalatial period\(^\text{44}\).

To conclude and return to the anachronistic title of this paper, it is possible to state that, in many examples, and whatever their particular functions were, wall paintings were not largely accessible. They adorned rooms of which the permeability and integration were rather low and to which access was easily controlled. So, practices related to these frescoes and painted stuccoes were more segregated (i.e. private in a sense) than

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\(^{43}\) Hillier and Hanson 1984, 145: “A solidarity will be transpatial to the extent that it […] emphasizes the discreteness of the interior by strong control of the boundary. […] The essence of a transpatial solidarity lies in the local reproduction of a structure recognizably identical to that of other members of the group. Such a solidarity requires the segregating effect of the boundary to preserve interior structure from uncontrolled incursion. Solidarity means in this case the reproduction of an identical pattern by individuals who remain spatially separated from each other, as well as from the surrounding world.”

\(^{44}\) Letesson and Driessen 2008.
inclusive (i.e. public). In most cases, their architectural setting is not particularly well adapted for the hosting of different categories of people which could reach these areas without too many interferences. A glance at the evidence from Akrotiri is very informative. It is interesting to note, for example, that in the West House, a building that has been labeled as typical of the local house model45, the rooms adorned with wall paintings have quite similar configurational properties46 (fig. 18), as already noticed by Palyvou: “The ‘typical Theran House’ [...] seems to include a specific room with wall paintings. It is usually situated deep in the fabric of the house, far from the entrance”47. Furthermore, the pole of convergence of the building – the room with the central column – had simple white plastered walls. The model does not exclude variations, however, and in this sense, another well-known building from Akrotiri, Xeste 3, could well have been closer to the exception than the rule. This building presents a very elaborate pictorial programme, developed over a large number of rooms48 with syntactical properties that are entirely different from the aforementioned examples. The building has been interpreted as a civic center of a communal nature, and the profusion of its wall decoration is most likely related to its special status49. With this observation in mind, we may now return to Crete and to Knossos. The palace at Knossos is home to the most elaborate and largest iconographic ensemble on the island50 (fig. 19 and table 3). Its mural paintings represent the most sophisticated and monumental examples of this art, even if – proportionally speaking – the other palaces have as many decorated rooms51. If the decoration programme of Knossos stands out amongst the palaces, it is rather due to its elaboration and iconography than to its profusion. Nevertheless, a quick glance at Knossos plan suffices to realize that – as Xeste 3 for Akrotiri – the spatial context of the frescoes partly departs from the syntactical model proposed here. Even if one admits that Minoan palaces were communal buildings52, could well have been closer to the exception than the rule. This building presents a very elaborate pictorial programme, developed over a large number of rooms53 with syntactical properties that are entirely different from the aforementioned examples. Blakolmer’s hypothesis, seeing the Knossos relief frescoes as the origin of a Neopalatial iconographic language54, is appealing but, again, does not fully account for the pictorial idiosyncrasies of the palace and even less for the apparently uncommon syntactical properties of several of its rooms adorned with wall paintings55. Indeed, some of the decorated rooms in this palace seem to have been more centrally located in the layout and more closely associated with other rooms56. Therefore, the practices associated with them could well have been less exclusive than in most of our 32 examples. But why is this57? Answering this question requires a detailed reexamination of all decorated rooms of the palace58 and furthermore a full architectural study of the complex architectural phases of the building59, both being far beyond the scope of this paper. We can at least say that this case strengthens the notion of a singular pictorial programme for the palace of Knossos and also of the practices associated with the wall paintings within it.

Finally, in terms of function, it is worth noting that, in several instances, frescoes at Akrotiri may have been visible from outside60. In our studied examples, the presence of windows is unsecure or totally unknown but it is tempting to propose that – for example – the ‘prestige/social integration’ function could have been effective

45 Palyvou 2005, 45–46.
46 For more detailed information on the spatial syntax of the West House see Letesson 2009, 305–8.
47 Palyvou 2005, 184.
48 See Palyvou in this volume.
50 Blakolmer 2010, 150.
51 Blakolmer 1995, 464, pl. LVa. In Blakolmer’s paper, various types of decoration are taken into account, from frescoes to stuccoes, whether on the walls or on floors. Adding floor stuccoes clearly raises the number of decorated rooms in Malia, Phaistos and Zakros without really affecting the proportions at Knossos.
52 See various contributions in Driessen et al. 2002; Letesson 2009, 351–57.
53 Blakolmer 2010.
54 Although the plan of the palace of Knossos is too confused (especially in terms of architectural phases) for space syntax analysis to be applied efficiently, it is immediately obvious that some of its decorated rooms are not as secluded and segregated as the majority of the 32 examples presented in this paper.
56 According to Macdonald (2002, 53), “many of the cracked dadoes and stone reliefs were apparently replaced with plaster and some new rubble walls were rendered with plaster and, in certain instances, with large-scale frescoes in more public places, perhaps with a view to emphasizing the control exercised by the elite over major religious ceremonies and even to communicate their power more clearly to foreign visitors”.
57 See Günkel-Maschek in this volume.
58 See Macdonald 2002 and more recently Macdonald 2005 for many new refinements in the architectural phasing of the palace.
59 Doumas 2005.
through the perception of the wall paintings from outside. The ‘ceremonial and ritual’ functions which are often suggested for wall paintings may have necessitated a spatial segregation and control. But glyptic as well as stone and metal vases, sharing the same iconographic repertoire as frescoes and probably influenced by the latter (especially those of Knossos60), may have worked as mobile devices playing a role related to that of wall paintings outside of their immediate and restrictive architectural context.

This last remark highlights the fact that the study of wall paintings is related to complex and multiple issues, therefore demanding a plural approach. This paper has argued for a new way of understanding the spatial context of wall paintings and therefore of the practices that were related to them. It also takes part in a broad re-thinking of Minoan architecture through space syntax61 and underlines that S. Immerwahr could not have been more right when she wrote that “[…] we cannot view the paintings in isolation, but must consider them as part of the rooms they decorated and see these rooms as part of an architectural complex”62.

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60 Blakolmer 2010 and in this volume.
61 Letesson and Driessen 2008; Letesson 2009.
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<td>Palaikastro B – 21</td>
</tr>
<tr>
<td>Palaikastro B – 5</td>
</tr>
<tr>
<td>Palaikastro B – 22</td>
</tr>
<tr>
<td>Zakros Palace – Banquet Hall</td>
</tr>
<tr>
<td>Site / Building</td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
<tr>
<td>Gournia</td>
</tr>
<tr>
<td>Palace</td>
</tr>
<tr>
<td>Knossos</td>
</tr>
<tr>
<td>House of the Frescoes</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Unexplored Mansion</td>
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<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td>Little Palace</td>
</tr>
<tr>
<td>Lustral basin 35 (west wall)</td>
</tr>
</tbody>
</table>

**Table 2** General table
<table>
<thead>
<tr>
<th>Location</th>
<th>Room or Area</th>
<th>Stucco Type Description</th>
<th>Condition</th>
<th>Reference(s)</th>
<th>Dimensions</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>South House</td>
<td>Lustral basin 10</td>
<td>Nature scenes In situ Fallen from the walls of the upper room</td>
<td></td>
<td>Immerwahr 1990, 170; Evans 1928, 378–79, fig. 211; Mountjoy 2003, 37-39, fig. 2.1; Hood 2000a, 28; Hood 2000b, 201</td>
<td>a 4</td>
<td>3,409 1,256 0,200</td>
</tr>
<tr>
<td></td>
<td>MMIIIB/LMIA</td>
<td>Fresco fragment (part of a bird) In situ Fallen from the upper floor</td>
<td></td>
<td>Hood 2000a, 28; Mountjoy 2003, 37</td>
<td>a 4</td>
<td>3,409 1,761 0,333</td>
</tr>
<tr>
<td>Malia</td>
<td>Palace Corridor XIX</td>
<td>Stucco painted in different colors, bands and marbling; dado decoration In situ</td>
<td></td>
<td>Immerwahr 1990, 182; Chapouthier and Demargne 1962, 25</td>
<td>b (?) 6</td>
<td>3,903 1,542 (?) ?</td>
</tr>
<tr>
<td></td>
<td>XXIV.1</td>
<td>Stucco with banded decoration (red) In situ</td>
<td></td>
<td>Immerwahr 1990, 182; Chapouthier and Joly 1936, 21–22, pl. IV.2</td>
<td>b 3</td>
<td>3,903 1,050 1,100</td>
</tr>
<tr>
<td></td>
<td>House E 8</td>
<td>Horizontal bands and metopes with stylized floral band (rosettes in wreath) In situ</td>
<td></td>
<td>Immerwahr 1990, 182; Deshayes and Dessenne 1959, 101, 138–40, pls. LXXIII and LXXIVa</td>
<td>b 5</td>
<td>5,656 0,913 2,625</td>
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<tr>
<td></td>
<td>Lustral basin 9</td>
<td>Painted stucco on north wall In situ</td>
<td></td>
<td>Deshayes and Dessenne 1959, 102</td>
<td>a 6</td>
<td>5,656 1,256 0,250</td>
</tr>
<tr>
<td>Nirou Chani</td>
<td>Villa 17</td>
<td>Sacral knot In situ</td>
<td></td>
<td>Koniorli 1996, 52; Immerwahr 1990, 182; Graham 1962, 59; Driessen and Macdonald 1997, 179; Evans 1928, 284, fig. 167</td>
<td>a 5</td>
<td>4,351 1,183 0,200</td>
</tr>
<tr>
<td>Palaikastro</td>
<td>Building B 21</td>
<td>Red wall-plaster, including pieces with modeled convex surface ?</td>
<td></td>
<td>Blakolmer 2010, 152; Bosanquet 1901–1902, 313–14</td>
<td>c 4</td>
<td>3,190 1,159 1,450</td>
</tr>
<tr>
<td>Building 5</td>
<td>1</td>
<td>Banded colored stucco decoration</td>
<td>In situ</td>
<td>MacGillivray et al. 2000, 40</td>
<td>b</td>
<td>1</td>
</tr>
<tr>
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</tr>
</tbody>
</table>

**Phaistos**

<table>
<thead>
<tr>
<th>Palace</th>
<th>77</th>
<th>LMI</th>
<th>Scraps of wall plaster – floral and geometric patterns; south and west walls</th>
<th>In situ</th>
<th>Immerwahr 1990, 183; Pernier and Banti 1951, 284–85</th>
<th>c</th>
<th>8</th>
<th>5,581</th>
<th>1,461</th>
<th>2,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>78</td>
<td>LMI</td>
<td>Scraps of wall plaster – floral and geometric patterns; south and west walls</td>
<td>In situ</td>
<td>Immerwahr 1990, 183; Pernier and Banti 1951, 284–85</td>
<td>a</td>
<td>9</td>
<td>5,581</td>
<td>1,693</td>
<td>0,250</td>
<td></td>
</tr>
<tr>
<td>79</td>
<td>LMI</td>
<td>Scraps of wall plaster – floral and geometric patterns; south and west walls</td>
<td>In situ</td>
<td>Immerwahr 1990, 183; Pernier and Banti 1951, 284–85</td>
<td>c</td>
<td>9</td>
<td>5,581</td>
<td>1,650</td>
<td>1,083</td>
<td></td>
</tr>
<tr>
<td>South wall of portico 85</td>
<td>LMI</td>
<td>Stucco decoration</td>
<td>In situ</td>
<td>Pernier and Banti 1951, 285</td>
<td>c</td>
<td>9</td>
<td>5,581</td>
<td>1,669</td>
<td>1,583</td>
<td></td>
</tr>
<tr>
<td>Niches at north end of CC</td>
<td>LMI</td>
<td>Stuccoed niches; pattern of latticed diagonals with rectangle</td>
<td>In situ</td>
<td>Immerwahr 1990, 183; Pernier and Banti 1951, 60–62, 442–45, fig. 277</td>
<td>d</td>
<td>2</td>
<td>5,581</td>
<td>0,821</td>
<td>2,083</td>
<td></td>
</tr>
<tr>
<td>81</td>
<td>LMI</td>
<td>Painted stucco (floral patterns)</td>
<td>?</td>
<td>Pernier and Banti 1951, 295–96</td>
<td>b</td>
<td>11</td>
<td>5,581</td>
<td>2,053</td>
<td>4,500</td>
<td></td>
</tr>
<tr>
<td>Lustral basin 83</td>
<td>LMI</td>
<td>Painted stucco (&quot;su fondo bianco-giallognolo una grande lista celeste curva, nell’interno della quale erano liste parallele rosse&quot;)</td>
<td>In situ</td>
<td>Pernier and Banti 1951, 301–3</td>
<td>a</td>
<td>12</td>
<td>5,581</td>
<td>2,288</td>
<td>0,167</td>
<td></td>
</tr>
</tbody>
</table>

**Table 2** General table (cont.)
### Pseira

| ‘Shrine’ (house AC) / east wall of room AC2 (?) | LMIA–B | Stucco reliefs of two life-sized women seated on rockwork | Fallen | Kontorli 1996, 52; Immerwahr 1990, 184; McEnroe 2001, 57; Betancourt and Davaras 1998, 65–67 | a | 2 | 1,5 | 2,841 | 0,500 |
| ‘Plateia building’ (BS/BV) / West wall of room BV1 | LMIA–B | Small pieces from a relief fresco or a fresco consisting of molding | Fallen (?) | Floyd 1998, 168–69 | a | 7 | 3,929 | 2,221 | ? |

### Tylissos

| Building A | Upper floor of 17 | LMI | Miniature frescoes | Fallen | Kontorli 1996, 52; Immerwahr 1990, 184; Shaw 1972, 179 | b/c (?) | 3 | 4,75 | 1,811 (?) | ? |
| Upper floor of 17 | LMI | ‘Fan’ or triple palm | Fallen | Immerwahr 1990, 184; Shaw 1972, 179, n. 10 | / | / | 4,75 | / | / |

### Zakros

| Palace | Niches of the lustral basin | LMI | Horns of consecration crowning platforms or altars | In situ | Kontorli 1996, 53; Immerwahr 1990, 185; Platon 1971, 182 | a | 6 | 4,216 | 1,902 | 0,500 |
| Banqueting Hall, around all four walls | LMI | Spiral relief frieze | “The frieze was placed directly beneath the timberwork that supported the upper floor” | Immerwahr 1990, 184; Platon 1971, 172 | a | 4 | 4,216 | 0,880 | 0,167 |

1. **TT** = Topological Types  
2. **MD** = Mean Depth  
3. **RRA** = Real Relative Asymmetry (Integration Value).

<p>| Table 2 General table (cont.) |</p>
<table>
<thead>
<tr>
<th>No.</th>
<th>Name of the fresco</th>
<th>Location</th>
<th>Datation (Hood 2005)</th>
<th>Datation (Macdonald 2005)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sponge Imprint Fresco</td>
<td>North-West Portico</td>
<td>MMIIA – MMIIIB</td>
<td>MMIIIB (p. 135)</td>
</tr>
<tr>
<td>2</td>
<td>Bull reliefs</td>
<td>North Entrance Passage</td>
<td>MMIIIB</td>
<td>MMIIIA – MMIIIB (pp. 126–27)</td>
</tr>
<tr>
<td>3</td>
<td>North-West Fresco Heap</td>
<td>North-West Portico and Forehall to Initiatory Area</td>
<td>MMIIIB – LMIA</td>
<td>LMI (p. 212)</td>
</tr>
<tr>
<td>4</td>
<td>Miniature Frescoes and Spiral relief</td>
<td>Early Keep Area</td>
<td>LMIA – LMIB</td>
<td>LMIB (pp. 93–94)</td>
</tr>
<tr>
<td>5</td>
<td>Bull and Spectators Fresco</td>
<td>Lower cists in West Magazine XIII</td>
<td>MMIIIB</td>
<td>LMIB – LMI (p. 211)</td>
</tr>
<tr>
<td>6</td>
<td>Jewel Relief Fresco</td>
<td>Gallery of the Jewel Fresco</td>
<td>MMIIIB</td>
<td>/</td>
</tr>
<tr>
<td>7</td>
<td>Flowering Olive Spray</td>
<td>Gallery of the Jewel Fresco</td>
<td>MMIIIB</td>
<td>/</td>
</tr>
<tr>
<td>8</td>
<td>Miniature Fresco</td>
<td>Entablature below later west façade of Central Court</td>
<td>MMIIIB</td>
<td>/</td>
</tr>
<tr>
<td>9</td>
<td>Dress designs and jewellery from life-size figures</td>
<td>Below Corridor of the Procession</td>
<td>MMIIIB</td>
<td>Sixteenth century (pp. 95–96) before Procession Fresco</td>
</tr>
<tr>
<td>10</td>
<td>Priest-King Relief Fresco</td>
<td>Corridor south of Central Court</td>
<td>LMIA – LMIB</td>
<td>Late sixteenth century – LMIB (p. 188)</td>
</tr>
<tr>
<td>11</td>
<td>Miniature Frescoes</td>
<td>Treasury (Ivory Deposit)</td>
<td>MMIIIB</td>
<td>/</td>
</tr>
<tr>
<td>12</td>
<td>Dolphin Fresco</td>
<td>Light Area of the Hall of the Double Axes</td>
<td>LMIA – LMIB</td>
<td>Late sixteenth century (p. 156)</td>
</tr>
<tr>
<td>13</td>
<td>The Dancing Lady</td>
<td>Light Area of the Hall of the Double Axes</td>
<td>LMIA – LMIB</td>
<td>Late sixteenth century (p. 157)</td>
</tr>
<tr>
<td>14</td>
<td>Bull in relief</td>
<td>Service Staircase</td>
<td>MMIIIA – LMIB</td>
<td>LMIA – LMIB (p. 187)</td>
</tr>
<tr>
<td>15</td>
<td>High Reliefs of Athletes and Griffins</td>
<td>Fill above North-South Corridor</td>
<td>MMIIIB</td>
<td>LMIB (pp. 82, 186)</td>
</tr>
<tr>
<td>16</td>
<td>Ladies in Blue</td>
<td>Small room west of the Corridor of the Draught Board</td>
<td>MMIIIB</td>
<td>LMIB (p. 187)</td>
</tr>
<tr>
<td>17</td>
<td>Labyrinth Fresco and Marbled Dado</td>
<td>East side of Palace</td>
<td>MMIIIA – MMIIIB</td>
<td>/</td>
</tr>
</tbody>
</table>

**Table 3**  Knossos wall paintings and their location.
Betancourt, P.P., and C. Davaras. eds. 1998

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Aegean Imagery and the Syntax of Viewing

Diamantis Panagiotopoulos

In his famous Oxford lecture on art history and the social sciences E. Gombrich commented on one of the differences between art history and archaeology with the following words:

“On a purely practical level the archaeologist is saved from the agony of selection by the relative scarcity of his evidence.”

In the case of Classical Archaeology this is undoubtedly true, although none of us would ever think that this relative scarcity of evidence has made the scientific pursuits of archaeologists in any way easier. As far as Aegean Archaeology is concerned, things are, however, more difficult since the agony of selection in fact turns to an agony of collection. Even after more than 100 years of intensive scientific research, the material, pictorial and written evidence remains too scattered, prohibiting in most cases a proper understanding of ancient realities. This fact has determined from the very beginning not only the ‘field of possibilities’ of Aegean Archaeology, but also its trajectory. The scarcity of evidence was one of the main forces that propelled the crucial turn toward archaeological theory since the early 1970s, initiating the most dramatic paradigm shift in the discipline’s history. Since then, Aegean archaeologists have been adopting a variety of theoretical models aspiring to fill some of the numerous gaps in the material evidence. Today, it is clear that Aegean archaeology has to invest in theory or at least in a sophisticated method of data evaluation and argumentation in order to reach the level of depth and complexity Classical Archaeology already possesses. Our sources are simply so fragmentary that they can be regarded not as a reflection but as a distortion of historical reality, if one confines himself to a purely descriptive method of what is preserved.

Despite this need for theory, the question that arises within the scope of our workshop on the social significance of images is whether a shift from a traditional history of ancient art to a theory-oriented archaeology of perception is possible. There can be no doubt that such an endeavour has some serious limitations. In an ideal case, the main objective of such an approach should be to reconstruct specific viewing situations, by focusing on the various devices that produced the viewing experience. Not the isolated image but the complex social interaction among image, viewers and context can be the only adequate approach, since the dominant meaning emerges from this social interaction. Borrowing and modifying a term from modern film theory, I would like to define the target of this kind of approach as the visualistic apparatus. In film theory, the term cinematic apparatus refers to the traditional space of the cinema that includes a darkened theatre, the seating arrangement, the movie screen, the film projector, film and sound, and the psychological disposition of the spectator. The way in which the spectator is positioned within this darkened room between the hidden projector at the back and the screen at the front determines his sensual experience in the movie-viewing context: Here, a fictional world is disguised as something real in which he/she is participating as a passive observer. An Aegean visualistic apparatus would accordingly encompass the perceptual conditions to which the viewer was exposed: space, light conditions, the image carrier, the image itself, his/her psychological or intellectual disposition. All these elements guided the conscious focusing of sensory attention and determined the beholder’s visual experience. Following J.L. Baudry’s analysis of the cinematic apparatus theory, one may ask in the Aegean context whether the material apparatus in which the images were embedded, produced specific ideological effects and to what extent these effects were shaped by the dominant ideology. Our sources, however, do not allow for such a holistic approach. Without having the opportunity to access the viewer as a subject or his thoughts as written testimony and without being able to reconstruct a viewing situation in

1 Gombrich 1975, 34.
2 The term was coined by J.L. Baudry under the influence of L. Althusser’s concept of the ‘ideological state apparatus’, see Baudry 1986a; 1986b; further de Lauretis and Heath 1980; Heath 1981, 221–35; Stam et al. 1992, 145–49.
3 For an attempt to reconstruct an Aegean visualistic apparatus see the pathbreaking study of Palyvou (2000) on concepts of space in Aegean Bronze Age art and architecture; see also Palyvou in this volume.
4 Baudry 1986a, 288.
detail, we are forced to set a very modest aim. We have to develop explanatory models *a posteriori* (i.e. on the basis of the evidence at hand), models that take full advantage of our sources, yet without making things more complicated than they already are. If we want now to reduce the *visualistic apparatus* to its most basic elements, then we have to deal with the triangle of subject, object and predicate (viewer, image and the act of viewing). This basic triangle is neither an innovative theoretical construct nor an attempt to apply a linguistic approach to Aegean images. It provides, however, a very simple and effective instrument which will help me to structure my rather unsystematic considerations and marginal comments on the perception of Aegean imagery. My aim is not to provide a coherent theoretical model but a coherent matrix of methodological determinants that may help us to approach various aspects of spectatorship in the Bronze Age Aegean. What about space? Within the framework of this ‘syntactic’ scheme for the explanation of Aegean visual language, space will be something more than a simple adverbial determinant. It will operate as the key variable for defining each of these three elements. Although I will try to discuss different types of images, in the last part of my paper I will focus particularly on mural paintings. Frescoes and stucco reliefs encourage an attempt to treat them in relation to their spatial context and provide therefore the most fertile field for the study of visual perception in the Aegean Bronze Age. Given the constraints of space, the treatment of the issues in all these cases is intended to be provocative and essayistic rather than systematic. My basic aim is thus to demonstrate the potential of these approaches and not to thoroughly exploit it.

![The Knossian Sacred Grove and Dance Fresco depicting an enthusiastic crowd (after Siebenmorgen 2000, fig. 66).](image)

This approach is certainly one-sided, since it confines itself to the social framework of visual perception in Aegean societies. For a more comprehensive study of visuality in the Aegean Bronze Age, it would be essential to apply current methods of cognitive neuroscience for exploring the neurophysiological aspects of this communicative action, see for instance Clausberg 1999; Breidbach 2000; Singer 2004; Stafford 2004.
1. The Aegean viewer: the great stranger

Let us start with the subject, the viewer, this great stranger in the context of our enquiry. What do we know about the Aegean viewer? The first interesting thing is that we can see him. In the Knossian miniature frescoes, we see crowds attending – partly with enthusiastic gestures – what must have been a festival, athletic competition or ceremonial event (fig. 1). These people are not supportive figures, included only to give the scene some form of topicality. They occupy a very prominent part of the entire composition, emphasizing the communal character of the picture. It is worth exploring the meaning of this composition, since depictions of an audience are extremely rare in ancient imagery, yet a thorough discussion of this issue would lead us far beyond the scope of the present paper. What is most significant, is that these spectators were not necessarily identical with the viewers of static Aegean images. A laconic observation by T. Palaima brings to the point what we know from many ancient cultures and can take as social fact in the case of Aegean societies: “Iconography offers little evidence about the cultural attitudes of rural shepherds”.

In an Aegean context, we can even go a step further by assuming that the iconography at our disposal offers little evidence of the cultural attitudes of the ordinary people of an urban center such as Knossos or Mycenae. Why actually? A common feature of both cultures is the enigmatic absence of images in public spaces. If we leave aside the religious sphere and the countless statuettes which filled the open and closed spaces of Minoan and Mycenaean cult sites, the domestic and sepulchral spheres in both societies remained virtually aniconic. The only exceptions to this rule come from the very beginning and from a very late moment of Mycenaean culture: the grave stelae and the Lion Gate relief at Mycenae (fig. 2). In apparent contrast to the contemporaneous Near Eastern cultures, Bronze Age Aegean societies lacked a tradition of life-sized or monumental sculpture. The only medium or large size images known to us are frescoes and stucco reliefs which – given their delicate nature – were, as a rule, displayed in the interior of palaces or elite buildings. As such, they addressed only a limited audience, the resident elite and its guests, i.e. other elite members or high officials. Consequently, the perception of painted images in the Bronze Age Aegean was mainly a privilege of the upper classes. The populace of Minoan and Mycenae: a rare instance of an image in a ‘public’ space (after Marinatos and Hirmer 1973, pl. 163).

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6 Evans 1921, 527–28, fig. 384; 1930, 33, fig. 15 B; 35–36, fig. 18; 46–60, figs. 28–35, pls. XVI–XVII; Immerwahr 1990, 63–67.
9 For the most significant examples of the very weak evidence see the enthusiastic crowd attending the funeral games for Patroklos on the Sophilos dinos (Boardman 1974, 18, fig. 26) and the attendants of athletic games depicted in some Etruscan tombs (Herrmann 1992, 87, fig. 1). For the issue of spectatorship in Roman art see Lorenz 2007. In the latter case we deal however with human or mythical spectators who fulfill the role of ‘commentators’ on the images’ semantic content, guiding the real viewer “how to look at what is depicted” (Lorenz 2007, 666, 672).
10 Palaima 1999, 370.
12 See recently Blakolmer 2011, 68–71 (with references to previous research).
13 The large terracotta statues from the ‘temple’ at Ayia Irini on Keos (Caskey 1986) comprise the single exception to this rule.
14 A very useful hermeneutic tool for the interpretation of frescoes and stucco reliefs embellishing the representative rooms of elite buildings is provided in Hillier and Hanson’s classical study on the social logic of space, in which different patterns of encounter between inhabitants and strangers/visitors have been explored, see Hillier and Hanson 1984, esp. 17, 19, 82, 123, 140, 146, 163–97. J. Berger’s comment on the role of Renaissance painting as ‘symbolic capital’ for its proprietors may also help us understand the significance of these images for the spectator-residents of Aegean palaces and elite houses: “The pictures in a Florentine palace represented a kind of microcosm in which the proprietor, thanks to his artists, had recreated within easy reach and in as real a form as possible, all those features of the world to which he was attached”, see Berger 2008, 80.
15 This assumption is based on the traditional understanding of the function of Minoan palaces as exclusive and not integrative social spaces, see Panagiotopoulos 2006b, esp. 32–35.
Mycenaean urban centers and settlements seems to have lived in an un-pictorial social landscape, which contained only miniature-size images on seals, seal rings, or medium-size images painted on pottery, carved in stone and ivory relief or shaped in figurines from several materials. Given this fact, one may wonder to what extent the masses really participated in and identified themselves with the elite’s visual language and shared remembrance. We may assume that this iconic void in the public sphere was filled by other types of ‘images’. In a pre-modern society lacking a pronounced visual language in public spaces, architecture may have fulfilled beyond its specific practical function an iconic one, serving as a substitute for the missing pictures. For instance, the Cyclopean fortification of the Mycenaean citadels possessed a very strong iconic quality, serving not only as a defensive device but also as a massive border between elite and common people, thus cementing social inequality. Ritual or public performances, on the other hand, produced ephemeral, yet powerful images. On certain festive occasions, such motion pictures filled the neutral social space with dramatic action.

If we now suppose that the target audience of Aegean images was the wealthy elite, then it becomes apparent that the social distance or the social tension between the patron of the images and the spectator must have been drastically reduced or even abolished, since both of them came from the same social group. The future observer had probably already played a role in the conception of the work and could easily identify himself with it. This introverted aspect of Aegean imagery which applies to most of its pictures is crucial for understanding what most of them really aimed at. They ‘lived’ in segregated spatial entities, in closed and self-contained areas which shaped the living space of Aegean elites. The images did not intend to inform, impress, guide, awe or even frighten ordinary people. They reflected the life and collective memory of the privileged classes, satisfied their elevated aesthetic demands or responded to specific ritual necessities. Even if this observation is nothing terribly new, it may open up a new perspective on how to understand the extreme ambiguity of Aegean imagery. Gods, mythical heroes (?) or significant mortals appear as a rule without any distinctive attributes engaged in activities that are not easily definable.

The unbroken bond between images and their bearers resulted in a specific manner of visual presentation, a specific materiality and a specific social function that determined their ‘iconic energy’. In previous research, the thematic ideas of this versatile visual language have been intensively treated either in isolation or as a whole, so that it is truly difficult to provide a substantially new insight into their manifold symbolic implications.

If we turn from the subject to the object of visual perception, i.e. the image, we move onto much firmer ground, even if it is hard to tell whether we will ever be able to understand its raison d’être. Aegean images comprised a semantic skin covering the neutral surface of buildings and artifacts and filling them with meaning. The unbroken bond between images and their bearers resulted in a specific manner of visual presentation, a specific materiality and a specific social function that determined their ‘iconic energy’. In previous research, the thematic ideas of this versatile visual language have been intensively treated either in isolation or as a whole, so that it is truly difficult to provide a substantially new insight into their manifold symbolic implications.

2. The image: toward an Aegean decorum?

For the ambiguity of divine images see Blakolmer 2010, esp. 40: “Hence, only in few cases does the Aegean vocabulary of iconographic formulae allow a relatively clear definition and delimitation of a deity, whereas in most instances we have to deal with generic anthropomorphic figures”; also Blakolmer 2010, 43: “Especially the evidence of Late Minoan and Mycenaean clay figurines elucidates that the goddess’ image was treated by artists as an iconic stereotype of sanctity and, therefore, does not allow any further conclusions about any individual deity”; see also Blakolmer 2010, 50–56.

**This term is used here in its broad sense including not only ‘works of art’ but also architecture and performances.**

**For the ambiguity of divine images see Blakolmer 2010, esp. 40: “Hence, only in few cases does the Aegean vocabulary of iconographic formulae allow a relatively clear definition and delimitation of a deity, whereas in most instances we have to deal with generic anthropomorphic figures”; also Blakolmer 2010, 43: “Especially the evidence of Late Minoan and Mycenaean clay figurines elucidates that the goddess’ image was treated by artists as an iconic stereotype of sanctity and, therefore, does not allow any further conclusions about any individual deity”; see also Blakolmer 2010, 50–56.**

**Contrary to Blakolmer (2010, 56) who assumes here an ‘intentional ambiguity’ which allegedly enabled the adorants to recognize in an unspecified divine image whichever deity they wished to worship, it seems more plausible that this ambiguity is a problem of our etic perspective. There can be little doubt that a generic divine image standing in a specific sacral context was recognized by worshipers with consistency as a particular deity.**

**For the use of this term see Groenewegen-Frankfort 1951, 186: “Cretan civilization is unhistorical not only in the sense that the modern historian happens to be unable to write an articulate account of its past, a record in which events and personalities have name and character, but because it lacked the desire for monumental statement, pictorial or otherwise. We find no interest in single human achievement, no need to emphasize, to rescue its significance”.**

**Stoellger 2008, 186. As to their social function, Aegean images – and most ancient images generally – must have been symbolically ‘ordered’ and employed with a distinct intention in a clearly defined horizon aiming at an unambiguous affect on the spectator. Stoellger (2008, 188) characterizes such images as ‘dependent’ and juxtaposes them to ‘independent’ ones which are not subject to any specific intentionality.**
contents. Therefore, I would like to concentrate on the rather neglected, yet crucial matter of the cognitive framework that regulated the production, display and circulation of these images. The richness of the artistic vocabulary, the evident sense of a thematic and stylistic freedom and the unconventional subject themes have lead researchers to the implicit assumption that in Minoan art ‘anything goes’. This is however not true. A closer look at Minoan visual language reveals a series of rules or limitations in action. These rules seem to have operated at different levels, including subject matter, style, bearer and position of an image and became even more pronounced in Mycenaean imagery. The boundaries or unwritten rules of Aegean artistic production – that were probably shaped gradually over several generations or even centuries of unbroken tradition – may be defined as an elementary form of decorum21. An Aegean decorum could be comprehended at a very general level as a set of principles determining the appropriateness of subject, style and location of an image22. Let me provide several examples covering some of the aforementioned levels.

One of the main precepts of the Aegean visual decorum determined the relationship between images and writing. What immediately springs to mind when considering the history of the two main communicative codes of the Aegean Bronze Age is the fact of their absolute separation. Apart from the occasional combination of seal impression and inscription on Minoan and Mycenaean nodules and some very isolated exceptions of drawings on the versos of Linear B tablets23 or inscribed vases with painted decoration24, texts and images did not coexist. It is important to stress that even in the sporadic cases of juxtaposition of the two media in Minoan and Mycenaean administration, seal motifs and inscriptions seem to have conveyed different kinds of information without ever referring to each other. In sharp contrast to most Near Eastern cultures, writing never penetrated the hermetically closed and self-contained sphere of pictorial representation, either for labeling or for commenting on an image. Why texts and images lived two separate lives in the Bronze Age Aegean is hard to tell.

The constraints of an Aegean decorum also become tangible in the case of pottery decoration. A remarkable phenomenon in the history of Aegean crafts is the persistency of pottery painters in avoiding human and animal figures in action25. For more than sixteen centuries Minoan and Mycenaean potters embellished their clay vessels with charming linear, floral or even animal motifs in a rich variety of complex compositions (fig. 3). These motifs may in some cases have had a symbolic content, yet they were void of any activity26. Only with the emergence of the pictorial pottery in LH IIIA did vases become bearers of active pictures27. Seeking an explanation for what appears to be an absolute term in most parts of the history of Aegean pottery, we can only assume the existence of a strict hierarchical relationship between the vase’s shape and decoration. In this branch of craftsmanship, decoration seems to have fulfilled nothing more than the role of a delightful skin covering the vase’s surface and remained always the subordinated element28. This is a dramatic contrast to

21 On the essential Roman value of decor or decorum (‘appropriateness’) see Perry 2005, 28–49.
22 The determining influence of the patron’s intension(s) was part of this set of rules, see Hägg 1985, 209–10.
23 Palaima 1992, 64–71, pl. XX. Following Palaima’s thorough comments, it becomes apparent that in most of these cases the verso drawings were not inspired by the recto texts.
24 Raison 1968, 184, no. Z 1715, pls. CXVI–CXVIII. In this case, the ‘image’ is nothing more than a combination of abstract motifs. The same also applies to the linear decoration of inscribed stirrup jars.
25 According to Schiering (1998, 216, 227) the main reason for this phenomenon was the vases’ convex surface that provides an unsuitable field for the depiction of humans and most animals.
26 A notable exception to this rule is the unusually rich body of pictorial pottery from Akrotiri which reveals a distinct tendency towards ‘active scenes’, see Marthari 2000.
28 For the visual perception of pottery decoration which was heavily determined by its three-dimensional bearer see the enlightening comments by Müller 1925, 117–19.
black-and-red-figure Attic vases which despite their uncontented practical and aesthetic quality were degraded to bearers of images of mythical, ritual or profane action. The remarkable iconic turn of pottery from LH IIIA to LH IIIC with the emergence and flourishing of the ‘pictorial style’ is not easy to explain (fig. 4). The suggestion that this development can be explained by the decline of other artistic traditions of affluent visual language, such as frescoes and seal carving, is not very convincing. The principal motor behind this phenomenon must have been a new habitus of a specific social class which began to employ mythical and/or historical images for its self-representation in new arenas of social interaction. These images seem therefore to suggest the emergence of a ‘private taste’ that was independent from palatial fashions.

What about style? A conceptual framework determining the appropriateness of style seems to have influenced the various modes of visual representation on different media. In the context of Aegean societies, an imaginary paragone debate would have had an uncontested winner: not painting but relief and sculpture. It is apparent that each of the main branches of Aegean artistic production adopted and preserved throughout its history a distinctive mode of visual representation ranging from a perfect mimesis of real life to a total distortion of the same. Minoan stucco reliefs stick to a very naturalistic rendering of human and animal bodies. The same applies to carved or engraved reliefs and sculpture made out of stone, clay, ivory and other materials, which despite their small or even miniature size, display a remarkable interest in human or animal anatomy and motion. The absolute masterpiece of this tendency to realism, the ‘Palaikastro kouros’ reached a level of naturalistic imitation which can only be compared with late Archaic and Classical sculpture.

Two-dimensional images, on the other hand, developed a strongly conventional style of rendering. Even in the heyday of Minoan naturalism, the outline of a figure received much more attention than the body it enclosed. These images owed their arresting vitality not to a detailed mimesis of nature but to a spontaneous and fresh rendering of form and motion through vibrant lines, while the surfaces of humans, animals and plants show a uniform color without any internal markings and thus are stripped of any kind of realism.

Fig. 5 The ‘Palaikastro kouros’, detail of the left arm: a tour de force of Minoan realistic depiction (after MacGillivray et al. 2000, pl. D, b).

32 Cf. the more or less contemporaneous development of a sepulchral imagery that in style and subject matter diverged from palatial artistic principles, Panagiotopoulos 2007, esp. 212. For ‘official’ vs. ‘private’ art see further Hägg 1985, 209.
33 The term refers to the heated debate among Renaissance intellectual circles over which art, painting or sculpture, was superior in imitating the forms of nature more successfully.
34 Snijder 1936, 42–44.
36 Musgrave 2000.
37 A group of stucco reliefs depicting forearms and hands from the Knossian palace (Evans 1930, 504–7, figs. 350–52) clearly demonstrates that the stunning anatomic accuracy of the ‘Palaikastro kouros’ was not a unique achievement but rather an artistic tendency in Neopalatial Crete.
38 Nevertheless, human figures are depicted in some cases without any proper outline, see for instance the Fishermen from the West House at Akrotiri; cf. further Cameron 1975, 387; Hood 1985, 24.
39 For the first ingenious stylistic analysis of Minoan naturalism in painting see Reisinger 1912, 15–16; further Snijder 1936, 34–35, 38–39, 41; who underlines the lack of any organic structure in the human and animal bodies which give the impression of stretchy, rubbery figures; see also Hood 1985, 24.
This specific conventionalism of Aegean two-dimensional images for which the term ‘colored silhouettes’\(^{40}\) seems very apt indeed, can be effectively compared with the ‘silhouette art’ of Paleolithic cave paintings\(^{41}\). As for the pottery, we have – as already mentioned above – on the one hand an obvious preference for floral and marine motifs and on the other a neglect of animal and human figures. Aegean potters failed to develop a vocabulary for the representation of human and natural activity. When humans appear, they show a frightening degree of abstraction reaching in some cases the level of caricature\(^{42}\) (fig. 7). From the perfect mimesis, through naturalistic rendering and conventionalized style to caricature, the different branches of Aegean craftsmanship followed disparate trajectories. This stylistic divergence cannot be attributed only to the crystallization of different professional idioms, in other words to different artistic traditions transmitted more or less unconsciously from generation to generation. In the case of Aegean vase-painters, the primitive style in which human figures were rendered was certainly not the result of inability but obviously of disinterest or intention. For them, a mimetic illusionism of naturalistic images was clearly either unimportant or inappropriate.

In a different social sphere, we can push these observations a step further by speaking not only about a decorum but also about the existence of a canon determining the appropriation of images. In daily administrative practices at Minoan and Mycenaean palatial centers, officials of various ranks used seals engraved with a wide variety of motifs. These motifs served in their majority as markers of personal identity, even if in some instances they could have been used to demonstrate the affiliation of an individual to a specific group\(^{43}\). It seems apparent that within a closed and strictly hierarchical administrative system, the theme, style and quality of a seal image were to a great extent determined by the administrative or social status of the seal owner. Even if it is impossible to ascribe these motifs to eponym persons, it is more than obvious that the appropriation and use of a specific motif as indicator of personal or administrative iden-

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\(^{40}\) See Snijder 1936, 35 (‘farbige Silhouetten’).

\(^{41}\) Pigeaud 2005, 2007. See further Leroi-Gourhan 1992, 223: “the lines express the essential elements of the shape of the subject represented, without rendering the fine nuances of real, visible contours” (cited in Pigeaud 2007, 410); also Snijder 1936, 68. For the ‘primitive’ aspects of Minoan imagery see Hood 1985.

\(^{42}\) Schiering 1998, 200–3, figs. 54–56; further Poursat 1985, 52, figs. 1–3. For a notable exception, a beautiful female head depicted on a Palace Style amphora from Knossos, see Schiering 1998, 203, fig. 58.

\(^{43}\) This is likely for the so-called ‘look alikes’, i.e. very similar yet not identical seal motifs which may have been used for indicating not a person but a family, clan or institution, see Panagiotopoulos 2010, 305.
Aegean Imagery and the Syntax of Viewing

Fig. 8 Viewing context and the symbolic content of an image: seal impression on a Neopalatial nodule from Khania (CMS V Suppl. 1A, no. 137).

...tity was regulated by a sphragistic canon. There is a deep reservoir of relevant evidence from the Near East which makes evident that the seal’s subject matter and quality were directly reliant on the administrative position of the seal owner. The most apparent demonstration of this principle in the Aegean world is the group of 60 nodules from Thebes. Here, the owner of the single ring among 14 different seals, which also shows the most elaborate design of the whole series, can be identified by means of the inscriptions as the most important individual among his companions, possibly a Mycenaean ‘collector’. The regulated appropriation of images within the framework of a palatial sealing system clearly demonstrates that a study of Aegean images in isolation would lead us to a dead-end. Our main pursuit must be to embed these images in specific subsystems of social interaction in order to be able to comprehend their meaning. There is one very telling example which – in my view – makes the necessity of embeddedness more than apparent, since it clearly implies that in some cases symbolic meaning was determined less by the theme and more by the position of an image within a cautiously woven web of visual representation. A Neopalatial nodule from Khania (CMS V Suppl. 1A, no. 137) bears a seal impression with the mirror-inverted depiction of two pairs of shepherds milking their sheep (fig. 8). Before we forejudge that Palaima’s aforementioned statement is wrong, let us try to embed this motif into its original social context. Who can have stood behind this image? Nothing points to a person or a social group from the pastur...
If we leave aside the purely decorative motifs, the vast bulk of Aegean iconography consists of seal images. We are used to studying this rich iconographic material in high magnification and tend to neglect the fact that it must have been extremely difficult for the ancient viewer to see these pictures. The problem arose not only from the miniature size of seals or sealings but was also related to the material on which seal images appeared. There were actually two possibilities for viewing these images, either on the original as a negative motif (intaglio) or on a clay sealing as a positive one. The engraved design on the seals was in many cases – especially on those made out of colored or veined stones – virtually illegible (fig. 9). The positive design on the sealing was – in the case of a fine clay nodule – more discernible. Yet the sealings’ strictly profane context of use (the sphere of everyday administrative activities) did not provide an ideal setting for viewing an image. As J. Betts aptly expressed it: “The Cretan ‘office-boy’ was presumably not inclined to scrutinise each sealing with the precision of the modern scholar”.

How can we come to terms with the fact that the vast majority of the Aegean action images known to us could not be properly seen by ancient viewers? This very upsetting fact can only be compared – admittedly in a quite different scale – to the inability of the Roman – and modern – viewers to see the Trajan’s column reliefs. There is one simple way to untie this Gordian knot, by assuming, as F. Blakolmer has already suggested, that seal designs reproduced or – to be more specific – ‘extracted’ images from other art genres such as relief vases and large-scale stucco reliefs. Yet this assumption can be valid only for a part and not for the whole of this rich imagery.

Turning our attention to mural paintings, we see a variety of scales, ranging from the so-called miniature frescoes, to under life-sized, to life-sized frescoes. The difference in size undoubtedly reflected a deliberate difference in visual impact. The procession frescoes, with their almost life-sized proportions and the formal arrangement of repetitive figures incarnated what we could describe as ‘monumental’ in Aegean art. The rigid procession scheme of figures exuding an air of dignity possessed an emblematic quality and aspired to impress the viewer. On the other hand, the medium-sized or miniature friezes with their great wealth of detail appear to have had a narrative intent and thus a didactic quality.

The systematic study of frescoes in their original viewing context appears to be very promising. In recent years, a long series of important theoretical advances on the issue of the manifold relationship between image and space were made in the field of Classical Archaeology. The main focus of these studies was not the naive premise of using imagery as a key for the interpretation of room function but an attempt to explore the ways in which images interacted with spaces and the viewers, and to elucidate the structuring of domestic space by means of an iconographic program into public/representative – private/intimate. The Heidelberg Institute of Classical Archaeology has been actively involved in this new discourse on ancient images. Two PhD dissertations under the supervision of T. Hölscher studied the symbolic functions of images in Roman houses,

Fig. 9 The illegibility of seal images: engraved designs on seals made of colored or veined stones: a: CMS V Suppl. 1A, no. 197; b: CMS V Suppl. 1A, no. 198; c: CMS II.3, no. 271; d: CMS II.3, no. 310.

49 For the necessity to move the seal in order to be able to clearly discern the entire seal motif see Kyrieleis 1968, 8–9. According to Kyrieleis, this ‘cinetic component’ was intentional as it harmonically corresponded to the pronounced mobility of many seal images.

50 Betts 1967, 21.

51 For the impossibility of proper visual perception and its implications for the communicative role of this monument see the enlightening comments by Settis 1992; further Baumer et al. 1991, 262–63.

52 Blakolmer 2010 and in this volume.

dealing with mosaics and mural paintings. Both works launched different explanatory models for understanding the complex relationship between space, image and spectator. S. Muth classified the mythological themes of the mosaics into functional, socio-hierarchical and ambiental. Expanding Muth’s classification, K. Lorenz proposed a new taxonomy which referred not to the relationship between image and viewer but to the semantic ties linking images together. Taking the combination and mutual dependency of pictures in one room or building as basic criterion, she defined four types of semantic interplay: affirmative, complementary, contrasting and consecutive. Building upon these approaches, I would like to suggest a new and slightly divergent scheme for classifying Aegean mural paintings which is based on the relationship – or better the interaction – between image and its spatial context. If we look at these images from a purely spatial perspective (according to their meaningful relationship with the space which they decorated) we can postulate four categories: affirmative/enhancing, negating/contrasting, complementary and neutral/ambiental. The main purpose of this classification is to accentuate the functional character of Aegean frescoes by showing in which ways the thoughtful combination of room and image produced a variety of spaces invested with different symbolic meanings.

1. Affirmative/enhancing images are in harmony with the practical function of a space and can thus only confirm or enhance this function by means of a visual statement. A good example of a mural painting with an affirmative/enhancing capacity is the Knossian Procession fresco including life-sized male offering-bearers and some female figures, which occupied a large part of the long corridor leading from the West Porch Entrance to the heart of the palace (fig. 10). Being in full accordance with the function of the

Fig. 10 Affirmative/enhancing images: the Knossian Procession Fresco. Reconstruction by M.A.S. Cameron (after Evely 1999, 229).

54 Muth 1998.
55 Lorenz 2008.
58 For two very insightful approaches to this important topic see also Palyvou and Günkel-Maschek in this volume.
59 For previous attempts of a classification of Aegean frescoes on the basis of a direct relationship between depicted theme and room function see Hägg 1985; Marinatos 1984, esp. 32–33; 1985. Hägg and – to a lesser extent – Marinatos are convinced that the subject of the depicted scenes was somehow related to the rituals/activities taking place in the rooms. As demonstrated below, this is plausible only for some examples among the rich corpus of Aegean frescoes and stucco reliefs.
60 See Marinatos 1984, 32–33. It must be stressed here that the definition of these four types remains arbitrary, since there are some grey zones between them, as indicated below.
61 Cf. Marinatos 1984, 32: “Ritual scenes depicting actual ceremonies which are carried out in the very room they decorate”. Following Marinatos, Palyvou (2000, 429) defines this form of relationship between space and image as a ‘projection’ technique: “It has been suggested that actions and rituals possibly taking place within the room are projected on the walls like a photograph, capturing a momentous event. […] These pictures convey a very strong feeling of involvement: one might almost recognise oneself among the figures in the procession”.
corridor as the backdrop for such processions, the mural painting mirrored a specific ceremonial practice which was taking place in the very same locale. The fresco enriched or enhanced the atmospheric impact of this corridor that corresponded to a particular ‘way of seeing’. The nexus of architectural context and image obviously allowed for a mimetic experience of the depicted action. The splendor and gravity of the procession participants, and the solemnity of the ceremony in which they were involved, induced the viewer/visitor to adopt a decent attitude.

2. Negating/contrasting images are in disharmony with the function of their spatial context and generate a kind of counter-space. A negating/contrasting function is apparent in the case of mural paintings decorating some small and dark rooms in palaces or elite houses that involve images celebrating nature (fig. 11). These landscapes were sometimes enriched with an action image, probably representing a ritual. In all these cases the brilliant colors of the frescoes – even their subject matter – could be visually perceived mainly by means of artificial light. The dramatic contrast between the architectural space (a small dark room) and the subject matter of the frescoes (a colorful, vivid landscape), as well as the complete coverage of the walls’ surface with a landscape picture, makes it apparent that the image negated the actual character of its architectural space by creating a different space.

3. Complementary images interact with the function of a room thus creating a third or virtual space consisting of the actual space and the space of painted images. The so-called Throne Room of the Knossian palace can be regarded as the ideal example for this third category (fig. 12). On the north wall of this room, a real throne is flanked by two antithetic griffins. Based on the common iconographic scheme of

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Fig. 11 Contrasting/negating images: the Spring Fresco from Building Complex Delta in Akrotiri, Thera (after Marinatos and Hirmer 1973, pl. XXXVII).

Fig. 12 Complementary images: throne and wall painting in the Knossian Throne Room. Drawing by M.A.S. Cameron (after Evely 1999, 203, top row).

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63 According to Marinatos 1984, 32, these images “[…] enlarge the conceptual and spatial boundaries of the room […].”


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A pair of antithetic griffins flanking a goddess, H. Reusch suggested that the throne was occupied by a priestess or a goddess in the course of an epiphany ritual. Following Reusch’s persuasive hypothesis, which was later elaborated by W.-D. Niemeier, this spatial constellation made the throne and its occupant part of the composition. It provided an illusionistic ‘prospect’ which was stimulated by the synchronization of real and painted action. The person sitting on the throne entered the fantasy of the image and participated in its reenactment. He/she penetrated the iconic space, a compact, hermetically closed area which was clearly separated from actual space and created a new dimension of perception, a ‘third space’ or virtual space containing both living organisms and still images. The images belonging to this third type were activated by rituals and/or by the viewing process itself.

4. ‘Ambiental’ images do not have any form of interaction with their spatial context. An ‘ambiental’ function can be ascribed to the ‘miniature frescoes’ comprising panels and friezes with small figures and clearly defined frames (fig. 13). We can assume that these scenes did not generate a straightforward interaction with the room they decorated either by enhancing, negating or complementing its original function, but instead only created an ambience which satisfied the high aesthetic or intellectual demands of the cultivated viewer.

4. Concluding remarks

A study of the Aegean visualistic apparatus has to focus on its most tangible elements: the viewer, the image and the ways of interaction between viewer, image and space. Aegean images were embedded in closed spheres of social interaction. They comprised not a visual rhetoric – the aim of which was to persuade – but a visual dialogue with cultivated viewers who – depending upon the context – approached each image with

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68 A similar viewing situation can be assumed for the western wall of the Throne Room, where the door leading to the ‘Inner Sanctuary’ was flanked by another pair of griffins. According to Niemeier 1986, 76–83, this was the place where the priestess as epiphany of her goddess must have made her first appearance before she took place on the throne. One has to agree with Morgan 2005, 26, who ascribes a similar illusionistic effect to frescoes of our second group (‘negating/contrasting’), acknowledging, however, their ‘contrasting’ character: “One of the extraordinary features of Minoan paintings in their original context is their tendency to envelop the spectator in a total environment. In many cases, the paintings covered the entire surfaces of three or four walls, so that the person entering the room was immediately surrounded by the painted world. This was particularly effective in scenes from nature, where interior was perceptually transformed into exterior, much as with the illusionistic landscapes of Pompeii” (my italics); see further Morgan 2005, 27: “In the large-scale paintings, in particular, a sense of spatial depth – while far from the perspective illusionism of Greco-Roman painting – must have added to the impression of being an integral part of the painted world. Such enveloping of the spectator within the painted space has no real parallels in the ancient world at this time”. Morgan includes, however, under the term ‘large-scale paintings’ almost everything that was not panel painting filled with miniature figures. The classification proposed here is based not only on size but also on subject matter and its semantic relationship to the actual function of the built space in which this was embedded.
69 For a precise definition of the term ‘ambiental’ in this context see Muth 1998, 55–56, 61, 67–68.
70 Hägg’s assumption that in the case of the miniature friezes in Knossos, Akrotiri and Tylissos a close connection existed between the ‘festivals’ depicted and the rooms in which they were painted is unconvincing, see Hägg 1985, 212. For a similar hypothesis see also Marinatos 1984, 32: “Scenes which are relevant to the function of the space in which they exist but do not reproduce the actual ceremony performed in it”. The weakness of this assumption becomes apparent when Marinatos 1984, 34–51 – on the basis of the alleged direct correlation between room function and image – is forced to identify Room 5 of the West House at Akrotiri as a shrine, suggesting that this room provided the venue for a part of the festival depicted in the miniature frieze.
different expectations. As a whole, the pictures held a mirror in front of the beholder reflecting his beliefs, dreams, social identity and way of life. Given the fact that our evidence is too fragmentary, the aforementioned observations are highly speculative and can be only regarded as a contribution to a story – and not a history – of perception in Aegean societies.
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The following considerations are based on the assumption that a certain hierarchy of art genres existed in the ‘realm of images’ during the Aegean Bronze Age. Although distinct art forms – and their respective artists – in palatial Crete as well as on the Mycenaean Mainland interacted with each other, this does not mean that artistic interrelations were devoid of any rules. Therefore, the aim of this paper is to investigate to what extent and exactly how images on Aegean seals and objects of relief art can be helpful in reconstructing mural paintings\(^1\).

Although it has been argued by scholars that seal stones hardly ever copied the iconography of mural paintings, since this would suggest the isolation of a scene from its context on larger wall paintings, this is exactly what we come across in numerous seal images belonging to different narrative cycles. In spite of their small scale, a considerable number of seals and signet rings from LM I Crete present extracts from larger register scenes and frieze-like compositions, as I will try to demonstrate by a few examples. Moreover, it seems reasonable to postulate a distinct art form as delivering the original models of highly narrative relief images, and it will be argued that this art form was the large-scale stucco reliefs concentrated at the palace of Knossos.

It has been suggested by I. Pini that the amount of Aegean glyptic images currently known to us possibly comprises not more than 5–10 percent of the corpus originally existing\(^2\). Given the fact that, to date, only one preserved seal impression possibly can be connected with a seal that has survived\(^3\), the proportional amount of preserved Aegean seals, signet rings and seal impressions may well be even smaller. However, we have to bear in mind that in all other Minoan and Mycenaean art genres, our actual state of knowledge seems to be even more negligible. This applies for example to Aegean relief vessels made of gold and silver\(^4\) as well as to stone relief vessels\(^5\) and to vessels, boxes and other objects made of or decorated with ivory, terracotta, faience or wood\(^6\). Painted wall-plaster belongs to the most easily damaged material of architectural decoration and as a consequence, our knowledge of this art form is mainly restricted to small fragments\(^7\). However, in many cases, single pieces of small-scale wall paintings are more informative than fragments of large-scale representations, since even a small piece of an extensive miniature frieze can contain a multitude of figures and other pictorial elements. Thus, the most ‘problematic’ art form is large-scale wall paintings and especially the monumental images from stucco reliefs\(^8\). A large amount of Minoan relief frescoes consists only of single parts of larger-than-life sized human or animal figures and in many cases their iconography remains unidentifiable. Therefore, when dealing with Aegean Bronze Age iconography we depend to a great extent on comparisons between different artistic media. Especially in the case of large-scale fresco paintings on the flat wall or of relief plaster, a closer look at seal images and further art forms turns out to be extremely useful.

\(^*\) I am very grateful to the organizers of this conference for their invitation and hospitality. I also want to thank Sarah Cormack for her patience in reading this paper and checking my English.

\(^1\) Several questions raised in this article are also discussed in Blakolmer 2010.


\(^3\) See a seal stone from Elis, today in Berlin (CMS XI, no. 27) and a sealing from Pylos: CMS I Suppl., no. 180; Pini 1997, 9, no. 15, pl. 5.

\(^4\) Davis 1977; Laffineur 1977.


\(^7\) Immerwahr 1990; Boulotis 1995; Morgan 2005a.

1. Reflections of Wall Decoration in Other Art Forms

When looking for so-called ‘fresco painting features’ in Aegean art genres such as seals and signet rings, it is tempting to interpret horizontal border stripes or ornamental friezes framing figurative scenes as an indication of mural dado zones and similar elements reflecting the decorative scheme of architectonic walls or interior design. Some possible candidates can be found in glyptic images from Minoan Crete showing a series of figure-of-eight shields or Sacred Knot motifs above a dado zone with running spirals (figs. 1–2). The first ones can be well compared with ‘shield frescoes’ such as the LH IIIB example from Tiryns framed by spiral friezes at the bottom and top of the wall while a third frieze of running spirals is positioned in the middle of the wall behind the shield motifs (fig. 3). A similar combination of figure-of-eight shields and spiral motifs occurs in wall paintings from Knossos, Mycenae, Pylos and Thebes, although they mostly postdate the Neopalatial period of Crete.

Similar to these wall paintings and seal motifs, one of the polychrome ritual cups from the Tomb of the Double Axes (tomb 5) in the LM II necropolis of Isopata presents a figure-of-eight shield and two helmets on a background decorated with a spiral net design (figs. 4 a–b). A series of at least two large-scale helmet motifs is known from a wall painting fragment from Akrotiri on Thera. Moreover, it is remarkable that the walls of the Isopata vessels possess at their lower part a high socle zone while on their upper part, above a frieze zone, there follows a profiled frame decorated with dentate bands and crowned by a row of red painted circles (figs. 4 a–b). Thus, it is very tempting to interpret the compositional layout of these polychrome ritual vessels as a reproduction of, and reference to, an architectonic wall with a fresco painted zone between an undecorated socle and an upper stucco relief profile crowned by the wooden beam-ends of the ceiling.

Some seal images showing two superimposed decoration zones could also reflect mural decorations. Although the majority of these motifs – such as crouching quadrupeds, octopodes, bulls beside palm-trees and bucrania (figs. 5–6) – find close parallels in Aegean wall paintings, it is a deplorable fact that until now, the existence of such combinations cannot be verified by the wall paintings known to date. A combination of motifs such

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10 CMS II.3, no. 113; II.8, nos. 127, 276–278; III, no. 500; V Suppl. 3, no. 331; Sakellarakis and Sapouna-Sakellaraki 1997, 660–61, fig. 725.
11 CMS II.8, no. 127; V Suppl. 3, no. 331.
14 Evans 1914, 26–28, figs. 37 a–b, col. pl. IV; 1930, 309–11, fig. 198; 1935, 871, fig. 863; Niemeier 1985, 122–23, fig. 59, 9; 125–26, fig. 60; Rehak 1992a, 122–23, fig. 18; Borchhardt 1972, 46, no. 8 III, pls. 7–8.
16 Cf. Evans 1928, 309: “architectonic suggestion”.
17 See esp. CMS I, nos. 189, 329 (= Pini 1997, 22, no. 39); II.8, nos. 172, 498.
as these, however, reminds us of the information provided by Linear B texts of the Ta series from Pylos, recording the variegated iconography of appliqué pieces of gold, faience and ivory attached to wooden furniture such as ‘thrones’ and footstools decorated with motifs of a man, a horse, an octopus and a palm-tree, or adorned with helmets, bull’s heads and lions.\textsuperscript{18}

As in the case of the figure-of-eight shields mentioned above (figs. 1–2), several seal images present running bulls and crouching griffins above a socle zone of spiral or so-called ‘half-rosette motifs’ (figs. 7–10) and they probably ought to be interpreted in the same way, i.e. as a reflection of mural decoration.\textsuperscript{19} A series of ‘half-rosette motifs’ forms a socle zone also on the large gold-ring from the Tiryns Treasure (fig. 10) probably supporting the ritual character of the scene depicted in this frieze-like image.\textsuperscript{20} We should not forget, though, that in the mural scheme of Aegean Bronze Age architecture, ornamental friezes were mostly positioned above a figurative zone.\textsuperscript{21} Exceptions are the wall paintings in the forecourt of the Megaron in the palace of Mycenae\textsuperscript{22} and in the Throne Room of Knossos\textsuperscript{23} showing ‘half-rosette motifs’ in their socle zones.

That the exact position of decorative friezes probably was of minor importance for seal-engravers and other artists is demonstrated by the broad band of running spirals in the background behind a male figure carrying a ‘sacred garment’ and a double axe on seal impressions from Akrotiri on Thera\textsuperscript{24} (fig. 11) which could well indicate the wall-decoration of an interior room. A seal stone from Knossos shows a female figure carrying the same insignia in front of a horizontal frieze of a framed zigzag ornament at a lower level than on the Thera sealings\textsuperscript{25}, and a lentoid seal from Malia presents in its middle zone a frieze-like decoration in front of two figures (although this might represent an altar).\textsuperscript{26}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure4}
\caption{Fig. 4 a–b: Ritual vessels from Isopata (after Evans 1914, col. pl. IV, facing p. 26; 27, figs. 37 a–b).}
\end{figure}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure5and6}
\caption{Figs. 5 and 6 Gold ring from Dendra (after CMS I, no. 189) and seal image from Knossos (after CMS II.8, no. 498).}
\end{figure}


\textsuperscript{19} CMS I, nos. 179, 282, 293; II.6, no. 256; II.8, no. 475; V, no. 517. See further CMS I, no. 197. Cf. in general Shaw 1995, 96. See also the motif of a crouching griffin on top of a socle zone decorated with a wavy band on a gold sheet from Thorikos: Servais-Soyez 1984, 47–50, figs. 26, 6 a–b; Blakolmer 2007c, 68, fig. 6.

\textsuperscript{20} CMS I, no. 179.

\textsuperscript{21} Cameron 1976, 30–31, fig. 1; Laflineur 1990a, 248–49; Palyvou 2000; 2005a; Immerwahr 2000. For border ornaments on the upper part of seal images see CMS V, no. 32; XII, no. 135.

\textsuperscript{22} Wace and Lamb 1921–1923a, 190–92, fig. 191; 1921–1923b, 234–35, fig. 46, pl. XXXV a; Matz 1956, 112, pl. 80 top.

\textsuperscript{23} Evans 1935, 919–20, fig. 894; Mirié 1979, 47–49; Niemeier 1986, 84–85; Cameron 1987, 323, fig. 7.

\textsuperscript{24} CMS V Suppl. 3, no. 394.

\textsuperscript{25} CMS II.3, no. 8.

\textsuperscript{26} CMS II.3, no. 146. Cf. further the seal motif CMS II.7, no. 16.
A further example of an indoor scene as indicated by the representation of mural decoration is probably to be recognised in the widespread seal motif of the ‘Goddess with snake-frame’ flanked by griffins or lions (fig. 12). In some examples these creatures have been placed upon their own baseline on a higher level than the central figure and thus probably refer to the mural paintings of a distinct ceremonial place, in all likelihood reflecting a ritual act which took place in the Throne Room of the palace at Knossos with its characteristic mural iconography.

Consequently the seal images in question should not be understood as literal ‘copies’ of murals but rather reproduced the type of an image as connected to its architectonic setting, that is, as a mural image in the interior room. Since the ‘half-rosette motif’ as well as running spirals constitute two motifs of highly symbolic value in the Aegean Bronze Age, it appears plausible that by their inclusion into these seal images a more general allusion to iconographical models on palace walls was attempted.

More problematic is our understanding of simpler frame design at the lower edge of seal images. A single horizontal base-line of a figurative scene in the form of a frieze need not indicate by itself any connection with mural iconography. However, there occur horizontal stripes in the form of one or more courses of ashlar masonry, a dentate band, a socle-zone decorated with diagonal lines or a zigzag motif or simply consisting of parallel lines (figs. 13–18). These examples allow us to raise the question whether these socle ornaments merely represent an abstract design filling the void lower part of the lentoid or oval seal surface or whether we are allowed to interpret them as a reflection of – or rather an allusion to – mural images consisting of a large-scale iconographical motif above a dado zone. In the case of simple border stripes, we have to be cautious in interpreting them, of course. It is remarkable though that all these seal motifs can be understood as representing outdoor scenes, as is indicated by plants and trees depicted in the background. This fact allows us to exclude an interpretation of the lower zone as representing stone-paved palace courts, raised walks or low walls in front of the animals or human figures. A distinct iconographical topos, however, seems to be the motif of the agrimi crouching on top of the flat roof of an architectural structure indicated by two or more courses of ashlar masonry. This occurs on several seals and is comparable to related scenes on the Shrine Rhyton from Kato Zakros.

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30 CMS II.3, no. 21; II.8, no. 515; V Suppl. 1A, no. 186; V Suppl. 1B, no. 113; V Suppl. 3, no. 392; VI, no. 336; XII, nos. 137, 249.
31 CMS I, no. 91; I Suppl., no. 34; II.7, no. 16; II.8, no. 487; III, no. 122; V, nos. 191a–b; V Suppl. 1A, nos. 145, 164, 175; V Suppl. 1B, no. 60; V Suppl. 3, no. 63.
32 CMS II.3, no. 271; II.5, no. 317; III, no. 504; VI, no. 270; IX, no. 136; XI, no. 55b.
33 CMS V Suppl. 3, no. 80; X, no. 135. For further ornament motifs see CMS V Suppl. 1B, nos. 114, 135.
34 CMS I, nos. 223, 229, 276; II.3, nos. 24, 62, 78; II.6, nos. 43, 44, 160; II.7, nos. 37, 38, 70; II.8, no. 237; V, no. 433; VI, no. 128; IX, no. 13D; XI, nos. 55a, 57; Kenna 1960, 105, no. 122. See further Thomas 1995, 245–47, figs. 5–7; 2003, 215, pl. IX.
35 For this motif see Blakolmer 2010, 96.
36 CMS I Suppl., no. 92; II.3, nos. 339, 340; VI, no. 152; X, no. 281. See further CMS I, no. 193; XIII, no. 19.
The iconographical spectrum of the seal images showing socle-like zones (figs. 13–18) is rather restricted and mainly consists of crouching, standing or running bulls, boars and goats, bull-leaping scenes, occasionally procession scenes and deities as well as lions and griffins. On the other hand, dado-like zones remain widely unknown in the large repertory of further seal images such as those showing multi-figurative scenes of epiphany, of animal attacks and struggles as well as extended scenes of nature. Since this rather limited range of iconographical scenes in question possesses good parallels in actual mural paintings and stucco reliefs, it is highly tempting to interpret the socle zones in seal images as a deliberate indication of architectonic walls showing a distinct mural iconography. This would mean that an allusion not only to palatial iconography but also to palace murals was indicated by most of these seal images. An interpretation of these socle zones as built of ashlar blocks, however, is problematic, since ashlar masonry certainly did not constitute a common and wide-spread form of socle zone visible beneath mural paintings in Aegean Bronze Age architecture. On the other hand, we must remember that large-scale ashlar masonry was imitated by fresco painting on plastered walls at Knossos and at Tell el-Dab'a.

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39 See Evans 1928, 443–44, fig. 260; Chapin and Shaw 2006, 59–68, col. pl. A.
40 Bietak 2007, 42.
2. Interior Scenes in Aegean Iconography

Let us move to the question of interior scenes depicted in Minoan and Mycenaean images. The principal artistic convention which indicates that a scene took place in an interior room is the addition of a pillar characterized by a rectangular ‘capital’\(^1\). Good examples of this convention can be found in the register scenes of boxers and wrestlers on the Boxer Rhyton from Hagia Triada, whereas pillars are lacking in the scenes of bull leaping performed in the open air as represented in the second register of this relief vessel\(^2\) (fig. 19). Similar pillars also appear in other images showing ritual scenes on Minoan seals (fig. 21) and stone vases\(^3\). If the traditional interpretation of the Temple Miniature Fresco from Knossos (fig. 20) as depicting a ritual gathering in the Central Court holds true\(^4\), this frieze presents a highly formalized depiction of the interior of the palace complex (or the ‘court compound’) including a so-called tripartite shrine as focal point.

Seal impressions from Hagia Triada present a scene of fighting warriors, with a scaled vertical stripe of uncertain character in the central part\(^5\) (fig. 21). Rather than a body shield given in profile, this element might represent a pillar designating a fighting scene as taking place in the interior. This reminds us of the vertical stripe in the frieze of the so-called Chieftain Cup from Hagia Triada (fig. 23), irrespective of its exact function and meaning\(^6\). It is remarkable, in my opinion, that only pillars with the characteristic rectangular upper part were used for indicating interior scenes on seals, but the typical Minoan column,

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\(^1\) Curti 1999; Lafineur 2005.


\(^3\) Cf. CMS II.8, no. 280; Kaiser 1976, 10–11, 172, fig. 7 b (‘Knossos 1’); 14–15, 131 (‘Knossos 5’).

\(^4\) Evans 1928, 804–8, figs. 526–27; 1930, 31, 46–65, pls. XVI–XVII; Cameron and Hood 1967, pls. II–IIA; Davis 1987; Cameron 1987, 326, fig. 8; Immerwahr 1990, 63–65, 173 (Kn No. 15), pl. 22.

\(^5\) CMS II.6, no. 17.

which constitutes an essential element of representations of architectonic façades, was used not in a single instance\textsuperscript{47}.

A further element which could have defined an interior scene in Minoan iconography was the plain white background, a feature which occurs only sporadically in Aegean mural paintings. N. Marinatos interpreted the fish-bearing boys (fig. 24) and the girl wearing a long robe in the wall panels of the West House at Akrotiri as virtually performing some ritual acts in the room itself\textsuperscript{48}. Although these three figures are positioned on top of a socle zone, this assumption seems to be quite convincing. A further example representing a scene as taking place in the actual room itself might be the male youths carrying vessels and a garment in Room 3 of Xeste 3\textsuperscript{49}. The same also applies to the procession scene in the staircase of Xeste 4, which shows a row of males carrying objects and ascending the steps\textsuperscript{50}. All these are depicted on a monochrome white background and positioned on a horizontal groundline.

By far the majority of figurative scenes in Aegean mural paintings, however, have a multicolored background. Even in Late Mycenaean procession frescoes, in most cases, the background is arranged by different colors in two or more horizontal or vertical zones divided by wavy lines\textsuperscript{51} (figs. 25–26). From the artistic point of view we can probably distinguish between ‘terrain-lines’ and ‘rockwork’ motifs, both of them multicolored and of irregular form. How do we interpret this widespread mode of rendering the background in Minoan as well as in Mycenaean figurative wall paintings? Does this traditional artistic feature really symbolize “nichts anderes als die nur wenig stilisierte Wiedergabe der Maserungen und eine Steigerung der Farben des Alabastersteines”\textsuperscript{52}, as W. Schiering has concluded in several articles since the 1960s\textsuperscript{53}? This would mean that in the respective images the figures have to be understood as walking in front of the real architectonic wall on which they were painted, thus presenting an artistic concept of space defined as “shallow stage” by Ph. Betancourt\textsuperscript{54}. In Minoan landscape scenes, however, identical multicolored, wavy zones constituting the background have been interpreted as natural terrain, as the interior of a cave\textsuperscript{55}, as the horizon and even as clouds\textsuperscript{56}. Unfortunately, Schiering’s arguments have never been discussed, examined or criticized by others, and this was probably for two reasons: Schiering’s explanation was published essentially in German, and he basically used the methodology of Classical art history by utilizing arguments of artistic form.

\textsuperscript{47} For the Aegean column see Wurz 1913; Graham 1962, 190–97; Wesenberg 1971, 3–27; Nörling 1995, 50–51; Eichinger 2004.
\textsuperscript{50} Doumas 1992, 176–79, figs. 138–41; Boulotis 1992, esp. 92, pls. 36 a–b; 2005, 31, fig. 8; Rehak 1996, 47–8, fig. 10.
\textsuperscript{52} Schiering 1960, 31.
\textsuperscript{54} Betancourt 1977, 19; 2000; Laffineur 1990a, 246–51; Blakolmer (forthcoming).
\textsuperscript{55} Evans 1928, 112–13, 453; Karo 1930, 313; Marinatos and Hirmer 1973, pl. LI bottom.
\textsuperscript{56} Riegl 1908, 7–8; Schiering 1965, 5–6; 1971, 5–6, 10; 1992, 318; Schäfer 1977, 12, 16; Walberg 1986, esp. 129–30; Immerwahr 1985, 45; Chapin 1995, 166–211; Schmitz-Pillmann 2006.
Of course, this is not the place for discussing the diverse interpretations of the wavy background, an essential part of figurative scenes in Aegean paintings. Let me only briefly state that, as far as I am concerned, Schiering’s concept of interpreting the multicolored, wavy lines as the incrustation of wall panels made of gypsum seems to be doubtful for several reasons. In any case, it is obvious that ‘terrain lines’ and ‘rockwork’ motifs have to be strictly distinguished from the rather schematic forms of painted imitation of mural socle zones made of gypsum. In iconographical scenes terrain elements are characterized by irregularity, arbitrariness and fantastic coloring. Thus, pictorial terrain elements such as those depicted in ‘procession frescoes’ from Knossos and Thebes (figs. 25–26) indicated that this ritual was located in the open landscape and not in the interior of a building or inside settlements. This interpretation is further supported by the depiction of plants, for example, in procession scenes in seal images.\footnote{See in general Niemeier 1989, esp. 167–169, fig. 1; Wedde 2004.}

There exist plenty of arguments that the so-called ‘cavalier perspective’ constituted the canonical concept of artistic space during the entire Aegean Bronze Age.\footnote{Matz 1956, 90–94; Schäfer 1963, 196–205; Stevenson Smith 1965, 63–64; Kaiser 1976, 185–86; Iliakis 1978, 618, 621; Chapin 1995; Palyvou 2005b, 185–89.} Based on the principle of ‘what is further up is meant to be further away’, the ‘cavalier perspective’ enabled a standardized depiction of numerous positions and situations of figures and objects in a logical as well as a coherent space. This principle can be best demonstrated by the miniature fresco from the West House of Akrotiri which depicts an artistic space reaching from the sea-bottom to the horizon and beyond (figs. 27–28). This is one of the few Aegean images which definitely show parts of the open sky. In the large majority of Minoan and Mycenaean wall paintings, though, the entire background represents the natural terrain. In my opinion, this also applies to procession scenes and images showing a similar treatment of the background – a multifunctional iconographical convention or an artistic tool which most probably defined Aegean procession scenes as taking place in the open space of the countryside, but not in the interior of the respective rooms.

Thus, in considering Aegean mural paintings in their iconographical as well as architectonic contexts, we can conclude that interior scenes occur only very sporadically.

\footnote{Morgan 1988; Televantou 1990; 1994; Doumas 1992, 58–85, figs. 26–48.}
Fig. 26  Procession Fresco from Thebes, reconstruction by H. Reusch (after Reusch 1956, pl. 15).

Fig. 27  Miniature fresco from Akrotiri, Thera: detail of the South frieze (after Doumas 1992, 71, pl. 36).

Fig. 28  Miniature fresco from Akrotiri, Thera: perspective view of Town II (drawing by the author).
3. Reflections of Fresco Iconography on Relief Vessels and Seal Glyptic

Let us move to the second part of this article which will focus on the question: How should we assess the artistic relationship between the fresco iconography on architectonic walls and other art forms? It has been assumed that pronounced differences existed between the iconography of Aegean seals and that of wall paintings due to contrasting formats and distinct artistic forms; only seldom did connections between them exist\(^60\). With assumptions such as these, however, we underestimate the essentially uniform ‘palatial’ character of Aegean Bronze Age iconography. Especially in the arts of Neopalatial Crete, regional predilections can scarcely be recognized, nor are any specialities of individual commissioners detectable\(^61\). Furthermore, it is astonishing that we can recognize hardly any fundamental changes in the development of Aegean iconography from the 17th to the 13th century; this can be demonstrated by the existence of numerous iconographical motifs which had a long life. The monumental stone relief image of the LH IIIB Lion Gate at Mycenae\(^62\), for example, possesses good iconographical parallels not only in other artistic media such as seals and reliefs of ivory, faience and terracotta, but it is also attested in its essential elements already in seal images of LM I Crete\(^63\). As is well known, the prominent mural decoration of the Throne Room in the LM I–II palace of Knossos was repeated in similar form at least in the LH IIIB palace at Pylos\(^64\). Furthermore, iconographical motifs such as the densely packed row of rams on a late Mycenaean ivory pyxis from Menidi\(^65\) have predecessors on clay sealings from LM I–II Knossos\(^66\). As a consequence, we should probably not expect any individual images or iconographical cycles to be strictly confined to one distinct artistic medium during the Aegean Bronze Age. Let us prove this character of strongly interrelated artistic genera in the Aegean by discussing two prominent examples.

4. The Origin of the Iconography of the Gold Cups from Vapheio in Minoan Stucco Reliefs

In spite of the judgement by F. Schachermeyr that “Die minoische Bildkunst ist durch die Schule der Siegelglyptik gegangen und hat hier die Bedeutung des Rahmens wie die Beschränkung auf eine geschlossene Szene kennen gelernt”\(^67\), it seems highly probable that in respect of Neopalatial artistic media exactly the opposite was the case. It has also been argued that seal images formed closed iconographical devices. It can be observed, however, that numerous motifs on seals and signet rings constitute isolated scenes and discrete figurative motifs taken from larger iconographical cycles, mostly in the form of extensive friezes. This phenomenon can be best demonstrated by the iconography of the gold relief cups from the LH IIA tholos tomb at Vapheio\(^68\) (figs. 29–31). Both friezes showing bulls and men in a natural setting are composed of six figurative topoi, since all bull motifs possess excellent parallels in seal glyptic, on stone relief vases, in wall paintings and in other artistic media\(^69\). Although one could assume that the iconography of these relief vessels was created

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\(^{60}\) See Younger 1995, 343; Shaw 1997, 502.


\(^{65}\) Lolling 1880, 27, pls. VII, 1–3; Perrot and Chipiez 1894, 826–29; Poursat 1977b, 145–46, pl. XLIV; Platonas-Giota 2004, 115–16, fig. 34, col. fig. 12 b.

\(^{66}\) CMS II.8, no. 521.

\(^{67}\) Schachermeyr 1961–1962, 184.

\(^{68}\) Tsountas 1889, 159–63, pl. 9; Schiering 1971, 3–10; Marinatos and Hirmer 1973, pls. 200–7; Davis 1977, 1–50.

\(^{69}\) See esp. Riegl 1906; Schiering 1971; Davis 1977, 1–50; Blakolmer 2005; 2007b, 32–35.
Neopalatial Crete. Pini’s idea that a collection of clay sealings could have functioned as models, ‘master drawings’ or ‘pattern-books’ enabling the dissemination of standardized iconographical motifs into different artistic media is very convincing. Regarding the original models of more complex iconographical scenes at a larger scale, though, it appears more plausible to postulate three-dimensional models, possibly made of terracotta.

Although the artistic origin and the craftsmanship of the gold relief cups from Vapheio have been discussed and interpreted in different ways, it appears most likely that not only the iconographical concept but also the gold cups themselves can be seen as genuinely Minoan works. By a closer comparison of the composition of the relief friezes of both cups (fig. 30), we can remark that they correspond to each other to a great degree, for example by antithetical poses of the raised or sunken heads and tails as well as by the concave or convex bending of the bull’s back. It must be emphasized that the original concept of these friezes was certainly not conceived for the walls of vessels, since these do not allow for a clear comprehension of all compositional details. Even by turning the gold cups in both directions, one would never be able to perceive the sophisticated composition of these friezes. Thus, it can be excluded that the highly elaborate composition of the relief friezes was planned to be seen only in small sections on the body of a circular vessel. When rolled up in the form of friezes, we are not only able to talk of standardized motif formulae, but also of a detailed ‘choreography’ of these highly sophisticated relief images, composed as a pair of antithetical friezes.

by combining different figural motifs of seal images, the artistic interrelation most probably ran in precisely the opposite direction. As an example of isolating figures out of larger iconographical contexts, I mention seals from Mochlos (fig. 32) and from Sellopoulo (fig. 33) showing a bull with its legs in an unnatural striding position. The bull’s hind leg displaced backwards makes sense only if it were pulled away by somebody, as it is represented on one of the Vapheio cups (fig. 31). By comparing these emblem-like motifs, we learn that they could be isolated and stereotyped, exchanged and combined in different ways. Thus, vignette-like seal motifs such as these strongly support the existence of some kind of ‘pattern books’ in Neopalatial Crete. Pini’s idea that a collection of clay sealings could have functioned as models, ‘master drawings’ or ‘pattern-books’ enabling the dissemination of standardized iconographical motifs into different artistic media is very convincing. Regarding the original models of more complex iconographical scenes at a larger scale, though, it appears more plausible to postulate three-dimensional models, possibly made of terracotta.

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70 CMS II.3, no. 68. For the seal stone from Mochlos see Hughes and Warren 1963, 352–55, pl. 18, 3 b.
72 Pini 1983, esp. 572.
74 See Blakolmer 2007b, 32–35 with further references.
In Minoan arts, elongated friezes such as those on the gold relief cups from Vapheio can be perceived in their entire length only on an architectonic wall, and in the case of a relief image we prefer a large-scale relief frieze as the original model. We can hardly argue in favour of the existence of alternative artistic media such as large-scale stone relief friezes or extended statuary groups such as in Classical antiquity. Thus, for the origin of the extensive concept of these relief friezes, only one Aegean artistic medium comes into question, that is the large-scale stucco relief, an exclusive art form mainly concentrated at the palace of Knossos\(^5\) (fig. 34). Although A. Evans’ concept has been doubted for several reasons, a composition of two antithetical stucco relief friezes in the North Entrance Passage, as suggested by fig. 35, in the Great East Hall or in some other prominent place in the palace of Knossos may have formed the prototype of this iconography which was then highly influential for Minoan metalworkers, seal engravers and other artisans\(^6\).

5. A Compilation of Motifs in the Wall Paintings from Room 14 at Hagia Triada

Some prominent seal stones, signet rings and relief images may also enable a better understanding of the iconography of the tripartite mural paintings from Room 14 of Villa A at Hagia Triada (figs. 36 and 37). According to previous studies, this iconographical cycle is composed of a kneeling female figure in a natural setting including lily and crocus plants to the left side, a female figure with raised arms and in a bent position in front of an architectural construction on the smaller central wall in the main axis of the room, and a landscape with wild goats, cats and birds to the right side\(^7\). The kneeling woman on the mural scene on the left wall should not be interpreted as a flowerpicker or adorant. P. Militello\(^8\) has convincingly compared the scene with the iconographical motif of invocation of a deity (fig. 37), as it appears on gold rings from Selinoupolo\(^9\) (fig. 38), Archanes\(^10\), Kalyvia\(^11\) and other sites\(^12\). Regarding the central female figure, it seems questionable whether this goddess

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\(^{5}\) Supra n. 8.


\(^{9}\) Popham 1974, 217–19, fig. 14 D, pls. 37 a–b.


\(^{11}\) CMS II.3, no. 114.

“raises her hands in an authoritative gesture” (P. Rehak63). Possibly we can ascribe to her a more concrete function. M. Cameron may have been right in linking the goddess with the animals in their natural setting depicted on the wall panel to the right64 (fig. 36). The most convincing combination of a seated or rather bent-over female figure with raised arms and accompanied by an agrimi is represented on seal impressions from Chania and Hagia Triada65 (figs. 39–41). This motif of a goddess feeding one or two goats66 is also well known from an ivory plaque from Mycenae67 and the ivory relief lid from Minet el-Beida (Ugarit)68 (fig. 42). The latter example probably constitutes a Levantine imitation of an Aegean motif, which was originally inspired by Near Eastern models. It is very likely that the fresco of the so-called Goddess with Grain feeding a quadruped from the Room of the Frescoes in the Cult Centre of Mycenae (fig. 43) constitutes a further example of this iconographic topos69. Although the traces of the animal accompanying this ‘Potnia theron’ have been interpreted as parts of a griffin or a lion, a reconstruction as some other animal to be fed by the plants in the goddess’s hands cannot be excluded70.

Thus, it appears reasonable to perceive the goddess on the central wall at Hagia Triada not as dancing, but rather as holding bunches of plants in both raised hands and as turning her head to the right in the direction of the goats which are approaching her (fig. 36). Although the fragment showing a cat stalking a bird has been found at the left bottom corner of the south wall and a fragment with a jumping agrimi to its right side71, this does not exclude the possibility that one of the

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64 Cameron 1987, 326, fig. 10 (reproduced laterally reversed); Evely 1999, 96 with fig.; 241–43 with fig.
65 CMS II.6, nos. 30–31; V Suppl. 1 A, no. 175. For this comparison see already Rehak 1997, 170, fig. 12; 173; and esp. Hiller 2001, 295, 301.
67 Xenaki-Sakellariou 1985, 127–29, pl. 35 (nos. 2473 and 2475); Poursat 1977b, 93 (no. 299), pl. XXIX; 1999, 684–85; Kantor 1960, 23–24, fig. 23; Yon 1979, 68–69, fig. 3.
68 Schaeffer 1929, 292–93, pl. LVI; Kantor 1947, 86–89, pl. XXII J; Poursat 1999, 683–84, pl. CXLV a; Yon 1979, 68, fig. 2; Gates 1992; Caubet and Matoian 1995; Rehak and Younger 1998, 249–50; Cornelius 2004, esp. 110–11 (no. 2.7) with bibliography.
69 See esp. Marinatos 1988, 246, fig. 2; Rehak 1992b, 50–58, pls. X, XV a, XVIII a; Morgan 2005b, 167–68, pl. 24 b.
70 Cf. the reconstruction as “lion-goat” proposed by Taylour 1970, 277; Rehak 1992b, 54 with n. 157.
other goats was positioned above the cat and thus immediately in front of the central goddess\textsuperscript{92}. Even if both or more agrimia were grouped together to the right side of the south wall, this would by no means exclude the possibility of a direct relation between the goddess and the goats running towards her. The architectural structure behind the goddess could best be understood as a podium-like seat.

If Militello’s reconstruction of a figure hugging large stones (considered to be baetyls) holds true (fig. 37), this motif well known in Minoan seal stones and gold rings was by no means confined to glyptic\textsuperscript{93}, but occurred also in additional artistic media such as wall painting. Moreover, assuming that the reading of the iconography and the reconstruction proposed here are correct, the prominent ritual scene in the respective seal images can be related to a further iconographic topos of a goddess feeding flanking goats. There is no evidence of further motifs of ritual activity, such as pulling at a tree or branch or a female figure in rhythmic movement in the Hagia Triada painting. This, however, should not be categorically excluded, as Militello mentions plaster fragments which could indicate the presence of a third female figure\textsuperscript{94}.

Thus, the tripartite wall paintings from Room 14 at Hagia Triada seem to represent a combination of at least two separate iconographic motifs, and make clear that the kneeling female to the left side is by no means directly addressed to or even worshipping the goddess in the centre, which was probably turned in the opposite direction\textsuperscript{95}. Even if the mural painting to the left side represented an invocation or epiphany scene\textsuperscript{96}, the image of the central goddess on the smaller wall most likely belongs to a different iconographic type. Nevertheless, the goddess constitutes the central figure of both iconographic sequences: she might be the goal of the ritual invocation by the kneeling woman (or girl?) to the left side and she is closely interrelated with the goats which she is going to feed. Moreover, the mural scenes from Room 14 at Hagia Triada demonstrate the distinct qualities of Minoan wall paintings: although large-scale figures and detailed depictions occur in stucco reliefs as well, the exuberant portrayal of different terrain forms and plants remains a speciality of paintings on the flat wall.

In addition, this combination of two distinct motifs on the Hagia Triada murals and some obvious aspects of improvisation in the composition suggest that the original model of this iconographic cycle should be sought neither in seal glyptic nor in two-dimensional wall painting. In any case, these comparisons show that even this prominent cycle of ritual iconography was by no means confined to one distinct artistic medium. Although extensive landscape elements are mostly lacking in seal images, this comparison demonstrates the flexibility among Minoan artists in transferring figurative motifs from one artistic medium into another and in creating innovative combinations.

In these and many further cases, Minoan seal images enable us to define the complex iconography of friezes in mural painting and stucco reliefs as well as on relief vessels of metal, stone and ivory. Images in these art genera by no means constituted individual, singular cases, but were strongly interrelated with each other.

\textsuperscript{92} See the reconstruction by Cameron, supra n. 84.
\textsuperscript{93} Cf. Morris 2004, 33.
\textsuperscript{95} Cf. the comment of N. Marinatos in Rehak 1997, 174; Marinatos 1993, 149–50 with fig. 121.
\textsuperscript{96} Supra n. 78.
6. Conclusions

I have to confess that – in contrast to the title of the present conference – my approach was anything but theory-based. Neither did I touch on social structures, nor was the aim of Aegean art to represent ‘realities’. However, one point becomes clear when we investigate the existence of iconographical cycles and the inter-relationship of different art forms: Aegean iconography was essentially a matter of strictly ‘palatial’ concern, well comparable to what is called ‘palatial architectural forms’\(^{97}\). Therefore, it might be doubted whether a ‘non-official iconography’ of isolated, individual or private character ever existed during the palatial periods of the Aegean Bronze Age.

What can be detected, though, is a certain hierarchy of artistic media. Above all, it is the art genre of seal glyptic which in many cases provides the ‘missing link’ for our comprehension of iconographical cycles well established especially in Neopalatial Crete and living on to a considerable degree until the late Mycenaean period. The lively exchange of iconographic motifs among Aegean art forms of different material, technique and size also paved the way for the establishing of iconographic standards and traditions which lasted for several centuries. Especially in images on seals and signet rings of Neopalatial Crete we recognize manifold relations and allusions to mural iconography transported on different levels: by reflections of architectural elements, by aspects of the artistic form and, last but not least, by the iconographic motifs themselves. Frieze-like compositions indeed do not fit the round and oval forms of LM I seals and signet rings, but derive, without any doubt, from other art forms which were more conducive to scenes in registers. Similarly, nor were the walls of circular vessels suitable for highly complex and sophisticated compositions as in the case of many relief vases in Minoan Crete. From the example of the gold cups from Vapheio (fig. 30), we have seen that large-scale stucco reliefs could have formed the original artistic medium by which the iconographic standards were created. These were in turn taken up by artists working in different materials and techniques. The wall painting cycle from Villa A at Hagia Triada (figs. 36–37) informs us about the combination of iconographic formulae as well as the distinct qualities of the painting on a flat wall. Both case studies clearly demonstrated the close interconnections between mural images and minor art forms in Minoan Crete.

Although Aegean arts show a strong tendency towards ‘miniaturization’, this should not blind us to the existence of one art genre which did present large-scale, polychrome relief images on walls – that is the Minoan stucco relief. Although it is difficult to prove this assumption on the basis of the preserved plaster fragments, there are many indications that larger-than-life sized figures in palatial wall reliefs could have constituted the original model for highly narrative figurative friezes as mirrored by certain images in seal glyptic and other minor arts.

One essential point is the basic difference between relief arts including seals on one hand and painting on a flat wall on the other hand. This latter required very special stylistic features such as the drawing of contours and a concentration on polychromy. Via a closer observation of the differences between fresco iconography and the thematic repertoire of the stucco reliefs in Minoan Crete, we gain the impression that in images painted on the flat wall the painters were unconstrained and flexible in their choice of motifs and their execution, whereas in stucco relief images they stuck to standardized iconographic *formulae* of figural scenes of humans and animals. Thus, rather standardized motif *topoi* spread out from the monumental stucco relief images on the walls of prominent areas in the palace of Knossos into most other artistic media. Thanks to its ‘plastic qualities’ the Minoan stucco relief possessed much better preconditions for influencing small-scale relief art than paintings on a flat wall were able to do. Thus, the common principle that major art forms affect minor art forms appears to be valid also in the ‘artistic realm’ of the Aegean Bronze Age.

The arts of Neopalatial Crete were essentially coined by the palatial ideologies of the Knossian elites. Their ‘images of power’ were most probably disseminated by means of artistic top-down mechanisms, that is, iconographic emblems were formulated and shaped in large-scale stucco reliefs – and to a lesser extent in mural paintings – in the palace of Knossos during the MM III and LM I periods. J. Crowley has remarked that Aegean seal images contained many essential themes seen in monumental relief and sculpture in the Near East and in Egypt, best exemplified by the Proskynesis Sealing from Hagia Triada. However, the only Minoan art form which probably possessed a similar symbolic value is the stucco relief. Art media such as precious ritual vessels as well as images on seals and sealings functioned as transmitters and distributors of representational motifs and thus served as a means for propagating iconographic concepts and iconological messages. Notably, the Knossos Replica Rings, precious metal rings from Neopalatial Crete, reproduced isolated extracts from extensive register scenes in concentrated, abbreviated or isolated form. These images, comparable to ‘quotations’, fulfilled the important ideological function of disseminating the complex iconography of the impressive, monumental stucco relief friezes on the walls of the palace at Knossos. Thus, the highly important decoration of Knossian palace architecture delivered the artistic models for the creation of ‘pictures of reminiscence’ spreading out into the wider Minoan realm.

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98 Blakolmer 2007b; 2010.
100 CMS II.7, no. 3; Marinatos 2007b.
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One of the most distinctive achievements of the Neopalatial period was the new and more elaborate way of providing the ‘lived-in’ environment of Bronze Age Crete with visual statements. Images and iconic objects now served to visualise and to present selected ideas and themes of relevance within certain spatial and social contexts much more abundantly than before. Pictorial representations were applied on the walls of architectural units designed for social activities, on vessels meant for ritual performances, and on signet rings used as markers of elitist or official status. Images were created on seal impressions in administrative circumstances, or in the form of three-dimensional figurines placed in sacred caves, peak sanctuaries, and other areas of religious or ritual practices. The finite group of pictorial themes and motifs reveals the highly selective character of Minoan pictorial language and indicates a specific set of social, religious, ideological or mythological ideas and contents which were supposed to be visualised, presented, and communicated within each particular context.

The most monumental form of images is the mural decoration which, from the beginning of the Neopalatial period onwards, occurs abundantly in the form of wall paintings and stucco reliefs. The range of pictorial themes and motifs depicted on the walls usually belongs to a spectrum which is also known from other categories of artefacts. In the case of mural images, however, these themes and motifs achieved a fixed spatial locality, that is, a precise location in which they were seen and experienced during the social practices performed in these decorated areas. By placing images on the walls of certain rooms or architectural units, these spaces were provided with thematic or symbolic connotations considered appropriate or necessary for semantically framing, accentuating or complementing the activities taking place.

In the present paper I would like to proceed from the premise that, by creating mural images within certain architectural units, a meaningful environment was created which provided the activities performed within each room with the appropriate visual and semantic framework. This framework not only echoes themes and motifs common to Minoan artistic production, it also links the practices performed to sociocultural ideas and concepts embedded in other kinds of practices which involved objects decorated in a similar fashion. I would like to argue that the display of themes and motifs on the walls as seen and examined in the context of their equivalents in more complex scenes on minor art objects can help to better understand the semantic backgrounds of activities located within the decorated rooms. I will examine how the pictorially represented figures, objects, and symbols served to enhance either directly or indirectly sociocultural practices taking place in an enclosed space, thus creating a meaningful atmosphere and an appropriate environment. Only a better understanding of the spatial allocation of pictorial themes and motifs, as well as of the ideological concepts associated with them, can provide further insights into the Minoan ways of creating meaningful surroundings for social activities performed there.
1. Theoretical and methodological outlines

The aim of my studies is to achieve a closer understanding of how the Minoans used pictorial elements and motifs to visually convey meaningful aspects to various situations of their social life. In my approach, pictorial elements and motifs are conceived as constitutive elements of spaces constituted by people, objects, and actions in specific places. In order to label this spatial arrangement in which both beings and objects of the real world and the pictorial world become interrelated, I have developed the term Bild-Raum to mean a combination of the theoretical concepts associated with Bild and Raum – picture/image and space, a topic considered elsewhere in more detail⁷. Pictorial elements are basically understood in a semiotic perspective, as has been discussed in several articles by L. Morgan⁶. Space is understood according to the relational concept established by sociologist M. Löw as a “conceptual unit of constitutive relationships”⁵, taking into consideration both the beings and objects set into relation to each other and the relationships between them. Space is constituted in positioning and synthesizing activities, reproducing spatial structures in which socially established ideas and structures become implemented and reaffirmed⁸. Fundamental to Bild-Raum is the idea that in addition to real beings and objects positioned at a place, pictorial elements of beings and objects as well as symbolic objects depicted, e.g., on walls also become part of the spatial arrangement and, thus, are ‘acting’ as artificially present⁹ constituents of spaces at these very places. They too had been positioned – in the case of wall paintings in a durable form – according to underlying ideas and structures, and were then synthesized as constitutive elements of the spatial arrangements. The challenge in analyzing the Bild-Raum constructs is to reveal the ideas and structures which were implemented by positioning pictorial motifs on the walls and which were recognised by Bronze Age individuals who perceived and synthesized the spatial arrangements, the latter being constituted both by people and objects and by artificially present people, objects, and symbolic values. I shall now briefly discuss how this challenge, in my opinion, may be met.

The analytical basis is the repetitive occurrence of pictorial elements and motifs¹⁰: it is a well-known fact that Minoans reproduced pictorial elements (such as ‘biconcave bases’, flowers, or running spirals) and motifs (e.g. bull-leaping, i.e. bull plus human leaper; ‘baetyl-hugging’, i.e. baetyl plus human figure leaning against it) in a variety of artworks, where they either appeared in isolation (e.g. anthropomorphic statuettes, bronze double axes) or were incorporated into more complex scenes or compositions, thus associating other pictorial elements. In the latter case they were incorporated in what has been termed an “iconic space” by Ch. Sourvinou-Inwood¹¹. It may be argued that iconic spaces also consist of the relationships established between their constitutive elements. Therefore, they can offer insight into how a particular pictorial element or motif was linked to other pictorial elements in order to express a broader significance or idea by means of the interrelation or ‘interaction’ of the constituents. However, pictorial elements and motifs do not always jointly form a narrative scene but have often been juxtaposed emblematically on the same surface. In this case, then, it may still be stated that both elements or motifs shared a wider concept of meaning and were juxtaposed in order to visually express different or complementing aspects of this concept. In any case, they had been depicted to represent a common or composite idea, and may therefore be regarded as pictorial expressions of related topics. In establishing the complexities of such interrelationships and associations, iconographic analysis can reveal the structures underlying the rendering and positioning of pictorial elements and motifs and, thus, the regularities in using them in particular constellations to convey the associated meaning. Such an analysis pertains not only to pictorial representations or the contexts and cycles of images in which the particular elements and motifs occur; it can also be extended to decorated artefacts on which the pictorial elements were shown and used within social situations, because their visual presence and meaning was appreciated, necessary and/or usual. In this way, the use(s) of a pictorial element or motif can be established on

5 The theoretical concept will be presented in detail in the publication of my dissertation on the topic “Minoische Bild-Räume. Untersuchungen zu den Wandbildern des spätminoischen Palastes von Knossos”, written under the supervision of Prof. Diamantis Panagiotopoulos at the University of Heidelberg.
9 On pictorial representations as “artiizielle Präsenzen” see Wiesing 2005.
a more general level, defining both the social and the pictorial contexts in which its occurrence as a visual and meaningful device was preferred. Turning the table, it may further be argued, that because of its meaning – which is, nonetheless, in many cases elusive to us – the pictorial element or motif was chosen only in particular circumstances in order to provide these contexts with the artificial presence of beings, objects or symbolic values, which were appropriate or relevant for these specific situations. Indeed, it has already been shown for some pictorial elements and motifs that they had a quite restricted ‘field of application’, e.g. the bull and bull-leaping indicating a special connection with the palace at Knossos (see below). It is, therefore, reasonable to suggest that in Minoan art the use and combination of pictorial elements and motifs followed established rules, and that the factors determining these rules were the prevalent ideas and structures the visual expression and presentation of which were served by the pictorial elements and motifs selected.

Having defined these ‘fields of application’ it is time to return to the pictorial elements or motifs placed on the walls of the buildings in question. It was often stated by A. Evans, F. Blakolmer, and others that pictorial compositions found on the walls of palaces and other buildings in the so-called palatial architectural style had their counterparts in representations on smaller artefacts. It is evident that on the walls they too had been chosen and depicted in a particular position in order to contribute their meanings not only to the room, but to the Bild-Raum constituted by people, objects, and actions in the decorated place. Using the background outlined above, it may be argued that the occurrence of pictorial elements and motifs both on the walls and within pictorial contexts traces back to shared concepts of structural relationships. That is to say, when positioning pictorial elements on a small-scale surface in relation to other pictorial elements, the same rules were followed as when positioning them on the surface of a wall and in relation to other pictorial elements or to real beings and objects. One example may suffice to illustrate this postulated relationship (fig. 1): the Corridor of the Painted Pithos in the palace at Knossos provides an architectural space decorated with friezes of running spirals placed at mid-height on the walls. A pictorial representation on a signet ring shows a human individual carrying a textile and a double axe in front of a spiral frieze placed at an equal height. This evidence points towards a related concept of activities located at places decorated in this way, a concept underlying both the decoration of the corridor and the representation on the signet ring. Further attempts can then be made to get an idea of the people and activities – implied in the formulaic representations of human figures in action within the iconic spaces – which were once located in, or conceptually associated with, the decorated areas. In the example used here, one might conclude that on specific occasions, (male) individuals carrying double axes and textiles moved through corridors decorated with spiral friezes – an event which was evidently worth depicting on signet rings. In this sense, the analyses conducted in order to approach Minoan Bild-Raum constructs may include not only the artificially presented constituents in their

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**Fig. 1** Simplified illustration of the postulated relationship between (a) a decorated place (3d-model made by the author after Evans 1930, 388, fig. 259; Hood – Taylor 1981, plan [no. 100]), (b) a pictorial representation (drawing by the author after CMS V Suppl. 3, no. 394), and (c) the Bild-Raum as reconstructed from (a) and (b).
arrangement on the walls, but also the objects and, hypothetically, the beings set in relation to them. In this way it is hoped to better understand Minoan ideas and structures implemented in the decoration of architecture, thus creating an appropriate and mutually complementary environment for social activities and supporting the reproduction of Minoan realities.

An analytic approach to *Bild-Raum* constructs can be undertaken in four steps, which are briefly described here\(^\text{13}\). First, the location, layout, and possible function of the decorated architectural space must be taken into consideration, that is, the form of the room, its relation to surrounding rooms, and additional architectural elements of functional significance. Second, the formal layout of the respective mural image and its position on the wall have to be considered. They played an essential role in the construction of *Bild-Raum* constructs, as they affected the way in which the mural images were perceived and influenced the atmosphere. The third issue concerns the iconographical study and interpretation of the depicted motifs. The pictorial themes and motifs were chosen because of their significance and of the relevance this significance had for the rooms to be decorated. To learn more about the purpose of the pictorial motifs in question, their appearance in other compositions and on other pictorially designed objects used in particular contexts will be explored. Even though the sets of associations remain elusive as to inherent meanings, aspects of the iconographic and per-

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\(^{13}\) Detailed examinations will be provided in the publication of my doctoral thesis. These will also include a chronology of the architectural phases before and at the proposed time of the wall paintings, and they will take into consideration the chronological changes of the ‘pictorial system’ from which the pictorial elements and compositions on the walls were taken.

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**Fig. 2** Ground plan of the palace at Knossos with indication of areas mentioned in the text (made by the author after Hood – Taylor 1981, plan).
formative contexts of the pictorial elements and, thus, of their domains of social relevance can be suggested. By retransferring in a final step the reconstructed meanings onto the architectural units it may be possible to obtain a better picture of the concepts underlying the decoration of the rooms and of the ideas associated with the activities performed therein.

Relying on these considerations, I shall now discuss three kinds of architectural spaces decorated with wall paintings from Neopalatial and Final Palatial Crete: halls and passageways decorated with friezes of running spirals, entrance spaces decorated with a bull motif, and rooms decorated with ‘sacred landscapes’.

2. **Case Studies**

2.1. **Running Spirals**

The running spiral appears as an element of architectural decoration in certain halls of the Neopalatial palace at Zakros and of the Final Palatial palace at Knossos. In the western wing of the palace at Zakros, relief spirals with central rosettes have been brought to light along the walls of the so-called Banqueting Hall (Room XXIX). Due to imprints of wooden beams on their upper edges they were reconstructed as a frieze running below the ceiling along the four walls of the room. The interpretation of the room as a Banqueting Hall is based on the *in situ* finds of wine amphorae and drinking vessels in the easternmost door of the pier-and-door partition in the north wall and along the western wall which presumably had fallen from some kind of shelf or cupboard. The particular design of the room’s floor with two rows of four rectangles framed by stuccoed edges complements the elaborate interior which points to the importance of the southernmost room of the hall system bordering the Central Court along its western edge. The Banqueting Hall, thus, displays its function within the broader framework of the *polythyron* hall system, the Hall of the Ceremonies to the north, the Central Court to the east, and the so-called Sanctuary Area with a lustral basin to the west.

At Knossos, two hall complexes, the Hall of the Double Axes and the Queen’s Megaron, including the so-called Bathroom, were decorated with friezes of running spirals with central rosettes, which ran along the walls at the height of the lintels of the pier-and-door partitions (figs. 2 and 3). In the eastern Loggia in the Hall of the Colonnades, another frieze of spirals with central rosettes forming the background of four figure-of-eight shields ran assumably along the eastern wall (fig. 4). In addition, a spiral frieze ran along the walls at middle

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14 Platon 1971, 170–73 with fig.
15 Evans 1930, 343–45 (Hall of the Double Axes), 381–83 (Queen’s Bathroom).
16 Platon 1971, 172–73 with fig.
17 Platon 1971, 170–72. Most interestingly, this floor design resembles to a great extent the floor patterning of the Inner Hall of the Hall of the Double Axes at Knossos, where it was achieved through the use of different types of gypsum, see Chlouveraki 2002, 29, 33, fig. 4, 2.
18 Platon 1971, 155–60.
19 The Queen’s Bathroom was not used as a lustral basin in the final state of the palace. Its plan, however, suggests that it might have been one in an earlier phase, cf. Nordfeldt 1987, 190. For further fresco fragments from the Residential Quarter see Evans 1930, 369–74, 377–83.
20 Evans 1930, 301–4.
Spirals, Bulls, and Sacred Landscapes

height, i.e. about 70 cm above floor level\(^\text{21}\) in the Corridor of the Painted Pithos connecting the Queen’s Megaron with the Service Quarter to the west (fig. 1). Evans interpreted this system of interconnected halls, rooms, and corridors as the domestic quarter or residential area\(^\text{22}\). The floors were laid with gypsum slabs, the walls faced with gypsum orthostates\(^\text{23}\). In the western portico of the Hall of the Double Axes, Evans reconstructed a wooden throne with a baldachin against the northern wall on the basis of impressions on the plaster accumulation\(^\text{24}\). Among the finds from the residential area are a pyramidal stand for a double axe as well as a broken slab with cupules from the central hall of the Queen’s Megaron, and a large rhyton from the Hall of the Double Axes\(^\text{25}\). As argued by Nordfeldt, these finds as well as the architecture of the polythyron hall system here and elsewhere are not typical of residential quarters\(^\text{26}\). Instead, the sacral character of the finds as well as the functional pier-and-door partitions which could affect the appearance of humans and performances within the particular rooms “point to the ceremonial function of these areas”\(^\text{27}\). A ceremonial or ritual function can thus be deduced from the architectural layout of the decorated rooms and halls which, at least in the Neopalatial period, possibly also had access to a lustral basin. The finds from Knossos, such as the stand of a double axe – a motif repeated in the form of mason’s marks on the walls of both the Hall of the Double Axes and the Queen’s Megaron\(^\text{28}\) – indicate a cultic aspect of the architectural spaces as well. Moreover, judging from the finds at Zakros, the consumption of wine might sometimes have been part of the activities performed in such areas in the Neopalatial period.

Formally speaking, the spiral friezes of the Hall of the Double Axes and of the Queen’s Megaron at Knossos as well as of the Banqueting Hall at Zakros belong to the category of upper zone decoration. In the Corridor of the Painted Pithos and, most probably, also in the Loggia of the Hall of the Colonnades\(^\text{29}\), the spiral friezes traversed the walls at mid-height and thus accompanied persons moving through the passageways. The spiral provided the halls and passageways with a symbolically charged atmosphere. To this end, I shall now analyse its broader purposes beyond a decorative function\(^\text{30}\) by examining the way the running spiral appears in combination with other pictorial elements.

\(^{21}\) Evans 1930, 387–88, fig. 259. This position on the wall must be due to the function of the room as a passageway, a typological feature further discussed by the author in her dissertation.

\(^{22}\) Evans 1902, 45; 1921, 315–59; 1930, 282–390, followed, e.g., by Graham 1959, 47–52.

\(^{23}\) Evans 1930, 318–86.

\(^{24}\) Evans 1930, 333–38.


\(^{26}\) Nordfeldt 1987, 190; Evans 1930, 369 (pyramidal stand), 346 (rhyton), 390 (slab).

\(^{27}\) Nordfeldt 1987, 193; see also Pelon 1983, 253; Marinatos and Hägg 1986, 73.

\(^{28}\) Evans 1930, 319 and 339, fig. 225; 425, fig. 216 (Hall of the Double Axes); 369 (Queen’s Megaron). The conjoint appearance of running spirals in painted relief and mason’s marks showing double axes also characterised the West Wing of the palace at Zakros, see Platon 1971, 94–100.

\(^{29}\) It is highly unlikely or a unique case that pictorial elements like the figure-of-eight shields extended from the main area of the wall into the upper zone above the height of the lintel. Therefore, it appears reasonable to argue for a lower position of spirals and shields in the main zone of the wall. As the Hall of the Colonnades was primarily a passageway, the spiral frieze placed at mid-height would provide a close parallel to the spiral frieze on the wall of the Corridor of the Painted Pithos.

\(^{30}\) Immerwahr 1990, 142–43.
A fascination for spiral motifs existed from the Early Minoan period onward. As a decorative element on pottery, on the pictorial surfaces of seals or on prestige items such as the MM sceptre-axe from Malia, the spiral was one of the most popular motifs used for the embellishment of various objects. From MM III onward, however, at least in some categories of artefacts, a more systematic occurrence can be noted. As will be shown below, the running spiral now appeared in a limited number of pictorial contexts and seems to have fulfilled a particular symbolic purpose within these contexts.

The closest parallels for the use of the spiral as symbolic architectural decoration are pictorial representations in which the spiral appears as the main ornament of door openings of structures often topped with horns of consecration. The most prominent example is the Neopalatial steatite rhyton, found in the palace at Zakros, on which spirals are framing the central door opening of the tripartite shrine or 'peak sanctuary'. On the later sarcophagus from Hagia Triada, three structures – a building on side A, an altar and another structure surmounted by a tree and four pairs of horns of consecration on side B – are decorated with running spirals. In these cases, the ornament appears as an additional visual element highlighting the particular character of the structure or of a certain part of it. Horns of consecration, trees, and further symbolic elements such as double axes, and libation jugs belong to the pictorial contexts, suggesting a primarily cultic-religious framework in which the depictions of the built structures decorated with running spirals played a role.

A cultic-religious association is further suggested by a glyptic image in the Metropolitan Museum, where the running spiral appears as a motif complementary to a Minoan genius (fig. 5h). Apart from this instance, however, in Neopalatial glyptic images the spiral never appears as a complementary motif, but in the form

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32 Hiller 2005, 259–60, fig. 1a.
33 For detailed photographs see Platon 2003.
35 CMS XII, no. 212 (Metropolitan Museum). The use of spirals as filling motifs goes back to Protopalatial times and earlier: A similar composition is provided by a MM II seal impression from Malia, see CMS II.5, no. 224. It shows a spiral next to a plant, while a similar combination of genius or Taweret and spiral can be found on a scarab from Platanos, see CMS II.1, no. 283.
of friezes accompanying the sceneries of depicted figures, objects, and actions (figs. 5a–g). As Evans and later Blakolmer have argued, these friezes with spirals can be understood as reflecting mural decorations of palatial buildings36. In any case they added a symbolic aspect to the themes depicted, an aspect which can be visually interpreted as being similar to the effect conveyed by spiral friezes on the walls to the architectural spaces surrounded by them. In both cases, the spiral friezes present a symbolic connotation to both the real and the pictorial arrangement they are grouped with. The Bild-Raum constructs in the halls of the palaces thus were provided with a similar symbolic aspect like the scenes on pictorial representations accompanied by spiral friezes. The reason for this lies in the prevailing concepts associating both the activities performed in the halls and the scenes depicted on small-scale media with the meaning of the running spiral. But what were the ideas and concepts behind this symbolic ornament in Minoan times? To address this issue I shall now discuss the pictorial compositions in which spiral friezes appear as well as the objects on which spirals were applied.

Spiral friezes form the background or ground line of warriors equipped with figure-of-eight shields37 (fig. 5b). These representations are closely related to images showing shields and spirals38 (fig. 5a), or shields, spirals, and ‘sacred knots’ or, more precisely, robes39 (fig. 5c). In another image, a male figure is represented carrying a robe and a double axe in front of a spiral frieze40 (fig. 5d). From this evidence, a set of pictorial elements emerges in which spirals, figure-of-eight shields or warriors carrying them, and robes appear to have had interrelated meanings. The latter image further provides a link to scenes involving the ‘cult of the double axe’, in which the spiral serves as a vehicle of meaning as well, as can best be seen on the later sarcophagus from Hagia Triada41. Finally, spiral friezes accompany bull-leaping scenes42 (figs. 5e–g), an important subject in and of itself (see below), and can be associated with, among other categories, human-animal encounters marking (elite) men’s control over nature43.

When one considers objects used by individuals or groups in the performance of rituals and/or daily practice, spiral decoration is frequently used. Its occurrence on pottery and its use on metal and stone vessels44 point to a preference for the running spiral on vessels used in contexts of elevated standard. Apart from these vessels, the range of objects decorated with spirals largely consists, as demonstrated by S. Hiller, of martial objects such as swords, daggers, and spearheads45. To these Hiller adds the association of the spiral with the motifs of the figure-of-eight shield and helmet46. This warrior connection has already been recognised in the glyptic images. The display of spiral decoration thus accompanies objects of utility manufactured for and owned by individuals of high social status, who defined themselves inter alia through the use and exhibition of precious weapons and objects47.

A further specialisation in the application of running spirals becomes apparent when one considers glyptic images and military objects: both motifs associated with the spiral in minor art forms and the association with martial objects speak in favour of a pronounced male predilection for spiral motifs. The connection with weaponry and warriors, with bull-leaping performed by male participants48 and, finally, with men fighting lions all point towards the idea that the running spiral had a particular relevance in men’s affairs and prac-

37 CMS II.8, no. 277 (Knossos); Evans 1930, 313, fig. 204. See also Blakolmer 2010, 92.
38 CMS II.3, no. 113 (Kalyvia). See also Evans 1930, 313, where another seal impression showing figure-eight shields in front of a spiral frieze is reported.
39 CMS II.8, no. 127 (Knossos).
40 CMS V Suppl. 3, no. 394 (Akrotiri).
41 See supra n. 34.
42 CMS II.6, no. 256 (Sklavokampos); I, no. 305 (Pylos); perhaps II.7, no. 34 (Zakros). A collapsing bull above a spiral frieze is shown on CMS II.8, no. 475 (Knossos).
43 Morgan 1995.
44 For running spirals on pottery see supra n. 39; for running spirals on stone vases see Warren 1969. Spirals frequently appear on bronze vessels of various forms, those from LM I Crete being characterised by social and ritual aspects, those from LH II–IIA/LM II–IIA testifying to the upper-class lifestyle of a ‘warrior aristocracy’, see Matthäus 1980, esp. 68–77.
45 Hiller 2005, 263. See also Blakolmer this volume, pp. 84–85.
or appeared as main actors in parades, and ostentation of social prestige, and pictorial environments of activities in which men performed. In this way, the spirals stood in relation to, or provided the ideological background for, the persons acting in the rooms and passageways. It may be proposed that particularly in the glyptic images the depictions supplemented by relevant this symbol had for the activities taking place, and for the persons acting in the very rooms, halls, and passageways. It may be proposed that particularly in the glyptic images the depictions supplemented by contexts and environments to ideas associated to the spiral. As both examples, by means of their use as objects and their pictorial decoration, refer to cultic-religious spheres, one might presume that in this association the palatial/elite and cultic/religious levels of meaning became intermingled, expressing the close link between Minoan cult and the Neopalatial elite.

In summary, it can be stated that the decorative use of the running spiral in the Neopalatial and Final Palatial period was concentrated on contexts and objects of an elite character, lending symbolic connotation to men’s actions in ritual, ceremony, and status display contexts, with a preference for martial affairs, the representation of male dominance over nature, and the ‘cult of the double axe’. It may therefore be assumed that the spiral evoked ideas related to all of these domains, and that the spiral was shown in exactly these contexts because of its affiliation with the themes depicted. From this evidence, it may further be concluded that the decoration of architectural spaces with friezes featuring running spirals was chosen because of the relevance this symbol had for the activities taking place, and for the persons acting in the very rooms, halls, and passageways. It may be proposed that particularly in the glyptic images the depictions supplemented by the spirals stood in relation to, or provided the ideological background for, the persons acting in the rooms and halls decorated with running spirals. In this way, the Bild-Raum constituted in the decorated halls can be traced back to the concepts underlying the pictorial representations on smaller media as well.

Rooms which actually were decorated with spiral friezes made of stone, stucco, or painting, existed not only in the Knossian palace but also in other buildings which usually show the idiosyncratic ‘palatial architectural style’ discussed by J. Driessen. It could therefore be supposed that the activities represented were meant to have taken place in these environments or – as it seems more plausible with regard to activities such as bull-leaping – were of relevance for persons connected with these physical, or conceptual, ‘spiralised’ environments, that is for the Minoan ‘elite’. The depiction of building facades decorated with running spirals, like the building in the ‘peak sanctuary’ scene on the Zakros rhyton or the built structures shown on the later sarcophagus from Hagia Triada suggest that the spiral was also used to link structures and their adjacent environments to ideas associated to the spiral. As both examples, by means of their use as objects and their pictorial decoration, refer to cultic-religious spheres, one might presume that in this association the palatial/elite and cultic/religious levels of meaning became intermingled, expressing the close link between Minoan cult and the Neopalatial elite.

Returning to the halls and passageways at Neopalatial Zakros and Final Palatial Knossos, the running spirals obviously enhanced the appropriate environment for the performance of ritual or ceremonial activities located in these areas. The depiction of a spiral frieze at mid-height behind the carrier of the double axe and garment could reflect persons walking through corridors like the Knossian Corridor of the Painted Pithos, which was decorated in exactly this way, highlighting again the relationship between the ‘cult of the double axe’ and the running spiral as architectural decoration. The association of spirals and shields finds its counterpart on the eastern wall of the Loggia of the Hall of the Colonnades, likewise a passageway, where the fresco might have provided a thematically appropriate environment for the persons passing by. It completed the Bild-Raum through the presence of both cultic-religious and martial ideas and heralded the character of the area persons passing by were about to enter. In the polythyron halls of the Hall of the Double Axes and the

49 In addition, the appearance of the running spiral on the kilts of the male figures in the Procession Fresco from the homonymous corridor at Knossos can be cited, see Evans 1928, suppl. pl. 27. In this sense they have also been adopted as décor element on the kilts of the male figures climbing up the staircase in building Xesté 4 at Akrotiri, see Doumas 1999, 177, fig. 138. From Akrotiri, the depiction of running spirals on some of the ships’ hulls can further be cited, the ships being occupied by men only, see Doumas 1999, 76–77, fig. 37. Cf. Laffineur 1983, 39, 43–44; 1984, 134; 1985, 248–49. Finally, it can be stated that this association with male affairs is equally observable on Mycenaean artefacts and it might be supposed that the Mycenaeans adopted the spiral particularly in this sense; see Hiller 2005, 263–65 for a collection of examples.

50 In this regard it is worth mentioning that the Hagia Triada sarcophagus, itself decorated with spirals all over, can be assigned to a male deceased; cf. Long 1974, 44–46.

51 Driessen 1989–90. Further examples are: fragments from House of the High Priest at Knossos, where a connection with the ‘cult of the double axe’ has been postulated, too, see Evans 1935, 205–15, fig. 170; earlier fragments from the palace at Knossos, namely from the area above the Loom Weight Basement, Evans 1921, 371–73, figs. 269–70; fragments from below the pavement of the Magazine of the Medaillon Pithoi, resembling those found among fresco heaps on the northern border of the Palace, Evans 1921, 374–75, fig. 272; fragments from the North-West Fresco Heap, Evans 1930, 36–42, fig. 20; MM fresco fragments from the palace at Phaistos, Levi 1976, 346, n. 6; and from a MM house on the southern slope, Perrier 1935, 172–73, pl. XL., 1; Immerwahr 1990, 22–23, fig. 6a; fragments of LM I spiral decoration from Chania, Schallin 2000, 201–10; LM I fragments from the Minoan ‘villa’ of Epano Zakros, Platon 1965, 216–24.
Queen’s Megaron at Knossos the find of a double axe stand as well as the signs on the walls equally suggest that the events taking place might somehow have referred to this particular cult. In addition, it is mainly this latter co-occurrence of spiral friezes and double axe mason’s marks which leads to the assumption that the concept underlying the architectural decoration of the east wing of the Final Palatial palace at Knossos traces back to a Neopalatial idea, an implementation of which can be found in the west wing with Banqueting Hall of the palace at Kato Zakros. The running spiral may therefore be recognized as a pictorial element which, from the Neopalatial period onward, was closely connected to the ‘cult of the double axe’, and which was, for reasons to be discussed elsewhere, often alluded to in pictorial contexts as well as on objects seen in primarily a masculine sphere of activities.

### 2.2. Bulls

In this second case study a particularly important topic shall be addressed, namely, the representations of bulls and bull-leaping. Four examples of bulls decorating the walls of entrance spaces can be cited from the palace at Knossos (fig. 2): 1) a bull depicted on the left, or eastern, wall of the West Porch, the entrance for those approaching the palace via the raised pathways of the West Court (fig. 6); 2) a bull motif depicted on the left, or southern, wall of the vestibule of the Throne Room; 3) a bull motif depicted on the left, or northern, wall of the loggia of the Upper Hall of the Double Axes, this probably also being an entrance space before reaching the central polythyron hall to the East; 4) finally, fragments of a bull motif have been found in the area of the North Entrance Passage, where Evans attributed them to the back wall of the balustrade above the West Bastions. Leaving aside for the moment the accuracy of this prominent reconstruction, at least four entrance spaces can be recorded where bulls of an impressive size are oriented towards, or moving towards, persons entering the building or important areas therein. Due to the poor state of preservation, it cannot be definitely established if these were depictions of bull-grappling scenes or of bulls only. Nevertheless, in these cases reference was obviously being made to the bull, and complemented both the Bild-Raum constructs created in the entrance areas as well as the architectural areas to which the very entrances led: namely the palace in the case of the West Porch, the Central Court in the case of the North Entrance Passage, the central polythyron hall in the case of the Upper Hall of the Double Axes, and the Throne Room in the case of the corresponding anteroom. In each case, the spatial layout and decorative scheme of the respective area point to its important function within the palatial complex; the bull on the wall, oriented towards the visitor, served to introduce the latter into the powerful atmosphere he was about to enter. The underlying concept thus can be described at first view as linking not only the entrance areas, but also the parts of the building entered through them to the bull. But why was this subject chosen to be depicted on the walls of these prominent areas of the palace at Knossos?

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52 See supra n. 28.
54 Evans 1935, 893–95, fig. 837; Hood 2005, 66–67, fig. 2,16.
56 Evans 1930, 294, 339, fig. 225; Hood 2005, 73, fig. 2,24.
57 See Blakolmer this volume, p. 94, fig. 34. Earlier fragments of a similar representation including an olive tree have further been reported from this area; see Hood 2005, 56–58 with bibliographical references.
58 Shaw 1995, 99 already challenged the reconstruction of the fragments along the rear wall of the balustrade above bastion A.
N. Marinatos has dealt several times with the subject of the bull, bull-hunting and bull-leaping, and also with bulls depicted on the walls of entrance areas. Following Marinatos, the bull “represented a formidable force of nature” and “charging or galloping outwards [its depiction was] emitting messages of power to the approaching visitor.” The bull, therefore, was an emblem of power. With regard to the occurrence of bulls on Knossian walls only, B. and E. Hallager similarly argued “that the bull per se or when involved in bull-leaping scenes was the symbol of power for the sovereign at Knossos.” To support their argument they called attention to evidence earlier stressed by J. Betts, namely that the bull motif was primarily used in administrative relations originating from Knossos. According to the Hallagers, the bull appears as a large and powerful animal symbolising the power of Knossos and the Knossian ruler. J. Younger further supports the Knossian connection by stating that “in Crete, outside the Knossos area, there is a paucity of bull-game imagery” and concludes that “bull-games seem undoubtedly […] a Knossian sport.” The direct link between bull-sport and the palace at Knossos thus constitutes fundamental evidence for the interpretation of the subject of the bull in general, and of depictions of bulls in important entrance areas of this palace in particular.

It has been discussed in a variety of papers that bull-hunting and the related but more acrobatic act of bull-leaping constituted long-established rituals performed by Bronze Age Cretans on certain occasions. In this regard some scholars have stressed the importance of bull-hunting and bull-leaping as being part of rites of passage. According to this view, the subjugation of the bull may have constituted one of the prerequisites for achieving the status of social adulthood and becoming a full member of society. Bull-catching, often indicated by the net used to trap the bull, was a collective act and can be traced back to the Early Minoan period on Crete. Since that time it was a constant element of Minoan imagery during the Protopalatial and Neopalatial period. The defeat of the bull, proving male skill and superiority over this powerful animal, appears to have been an important idea in the construction of social identity and self-conception.

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62 See also Blakolmer 2001, 32; Shaw 1995, 97, 104–5.
63 Hallager and Hallager 1995, 549.
64 From an iconographic point of view Hallagers (1995, 553) further state that in pictorial representations the bull was never at a disadvantage. Younger (1995, 509) however mentions several instances of harmed bulls; the notion of the invincible bull therefore must be doubted.
65 Hallager and Hallager 1995, 549–54 with further references.
66 Younger 1995, 523.
67 E.g. Marinatos 1993, 218–20; Zeimbekis 2006; Panagiotopoulos 2006 with further references.
69 With reference to Oromo culture Arnott (1993, 115) notes that “any boy who fails to complete the four runs suffers public humiliation”. Though we have no idea what happened to the losers, depictions of failing acrobats exist on various pictorial media, for example on the Boxer Rhyton from Hagia Triada, on Vapheio Cup B or in several glyptic images, cf. Panagiotopoulos 2006, 131–32. The thematisation of failure or inferiority might be interpreted as a device to simultaneously represent the danger of the athletic challenge and the ability and skill of those successfully overcoming it. Cf. Säflund 1987, 230–32, who stresses the Boxer Vase’s depiction of the successive contests which the Minoan youth had endured.
71 As recently demonstrated by M. Zeimbekis (2006, 28), reflections of this idea can be found in later Greek mythic traditions and textual accounts where the Cretan bull is consistently linked to social practices of male initiation. See also Marinatos 1994, 89, who argues that the Keftiu in Egyptian tomb painting were likewise characterised through their association with bulls. Cf. Säflund 1987, 231.
An increased pictorial display of acrobatic bull-leaping can be observed from the Neopalatial period onwards, particularly on artefacts owned and used by those likely to have been the Knossian elite\(^72\) (fig. 7). With regard to the highly formalised representation and idealised depiction of the ritual act\(^73\), it may be argued that it was a visual device invented to express the perfection and skill exhibited by the leapers in overpowering the bull. As a tool meant for display and set in relation to its owner, wearer or user, the image may be understood as demonstrating the power of these very persons in exercising control over the imposing animal. In this sense, the emblematic value of this type of representation, identifying its owners, wearers and users as members of this powerful group, would have produced a high degree of corporate identity and a clear marker of their elite status. If, furthermore, bull-leaping constituted one of the ordeals which male youths had to pass in order to achieve full membership in adult society\(^74\), the implicit understanding of the motif would also have included the successful performance on the part of the persons displayed. The subjugation of the bull thus seems to have been a deep-rooted subject of sociocultural discourse in Minoan Crete, and it may at some point have been claimed exclusively by the Knossian elite as an expression of superiority\(^75\).

Taking this cultural aspect into consideration, it appears necessary to interpret the decoration of entrance spaces at Knossos with this in mind. As mentioned above, bulls of an impressive size were depicted facing or moving towards persons entering the building itself or important areas therein. The bull (or bull-leaping scene) functioned as a focal point for the approaching viewer and provided a symbolic connotation to both the atmosphere of the entrance space and the rooms beyond, which were ‘labelled’ by the bull image just as the persons wearing or using the latter ‘labelled’ themselves by means of its display.

With regard to the latter, the West Porch in the Final Palatial period can be interpreted as a paradigmatic scenario: here, the pattern of paved pathways implies a specific way of approach. After advancing along the pathway which crosses the West Court and the older, now border-like East-West way, one had to go around the column and proceed towards the decorated eastern wall, before again turning the corner just in front of it and proceeding into the Corridor of the Procession (figs. 2, 6, and 8). This way of approach obliged the visitor first to look at the southern wall of the West Porch, the decoration of which is lost except for the painted dado, and then, after turning around the column, to advance towards the depiction of the bull or, rather, bull-leaping\(^76\). In this way, the painting provided an impressive welcome, on the one hand heralding the powerful atmosphere within the building and areas to which the entrance led and, on the other hand, “presencing”\(^77\) the occupants and attendants of the Knossian palace by emblematically referring to them\(^78\).

Considering the Bild-Raum construct created in the entrance areas and the choice of the subject of the bull or bull-leaping, it becomes clear that both in the decoration of the building and in the production of objects used in social practices, the same ideas of representing a social, namely Knossian elite, were implemented

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\(^72\) On the chronology of representations of bull-games see Younger 1995 with catalogue and earlier bibliography.

\(^73\) On bull leaping as ritual see Panagiotopoulos 2006.

\(^74\) E.g. Säflund 1989, 230–32; Marinatos 1989; Arnott 1993. For further references see Panagiotopoulos 2006, 126, n. 5.


\(^76\) In glyptic images, bulls shown in ‘lying gallop’ are mostly accompanied by a leaper, see, for example, CMS II.6, nos. 43, 44, 161, 162, 255–58; II.7, nos. 36–39; II.8, nos. 222, 223; V Suppl. 1A, no. 171; V Suppl. 1B, no. 135; V Suppl. 3, nos. 66, 103, 392, 404; VI, nos. 336, 342. Regarding the preserved foreleg of a bull on the eastern wall of the West Porch, it is highly probable that Evans (1928, 675–77 with figs. 428, 429) was right in adding a leaper.

\(^77\) Zeimbekis 2006, 33.

\(^78\) In a similar way, the graffito of a bull-leaping scene reported by Ch. Televantou (2000, 834–35, figs. 1, 2; see also Doumas 1999, 179, fig. 140) to come from the entrance and staircase room 5 in building Xesté 4, Akrotiri, Thera, may have been applied due to the emblematic value of the image, revealing the users of the building as being close to the Knossian elite.
to manifest their social position in direct connection to the Knossian centre\textsuperscript{79}. It can, however, be stated that small-scale depictions of bull-leaping did not include direct references to Knossian wall paintings as such, as did, for example, the seal images including spiral friezes referring directly to corridor decoration (see above). The emblematic bull motifs on the walls were self-contained, used in a similar way as small-scale representations of bull-leaping, and intended to complete the \textit{Bild-Raum} in the entrance areas in the sense of figuratively confronting the visitor with the powerful elite controlling the building he/she was about to enter.

\subsection*{2.3. ‘Sacred Landscapes’}

This final case study concerns the production of ‘sacred landscapes’ as ideal places for the performance of ritual activities. The conceptualisation and visualisation of the natural world played an important role in Minoan belief and ideology\textsuperscript{80}. In their most monumental form landscape scenes appeared in the course of the early Neopalatial period. They usually covered two or more walls of individual rooms in buildings characterised by ‘palace-style’ architectural forms. The distribution of find spots of natural scenes suggests that it was for the most part palaces and the so-called villas in which these artificial landscape environments were used. Access to the decorated rooms was most likely limited to owners of the buildings and to individuals admitted\textsuperscript{81}. The genesis and use of rooms embellished with artificial landscapes appears to have been directly related to the proliferation of the Neopalatial lifestyle. The purpose of this section is to consider the realisation of this kind of \textit{Bild-Raum} and to reveal the function and conception of the landscape scenes painted on the walls.

Natural scenes appeared in various forms and different kinds of rooms suggesting various circumstances of perception and use\textsuperscript{82}. As friezes, they were either placed in the upper horizontal zones of \textit{polythyron} halls\textsuperscript{83} or at middle-height on the walls of larger and smaller rooms with multiple access points\textsuperscript{84}, whereas in small chambers they covered the wall surfaces from the floor to at least the height of the lintel\textsuperscript{85}. With the exception of frieze decoration below the ceiling, the paintings were meant to correspond to the human horizon of perception and activity\textsuperscript{86}. By this means, the visible effect of the paintings upon the enclosed spaces was most likely similar, and the natural scenes created an all-encompassing environment for the persons acting in their realm\textsuperscript{87}. Regarding the \textit{Bild-Raum} construct it can be said that the spatial arrangement relating the depiction on the walls to persons performing in the room resulted in the impression of actually performing the respective practices within a ‘natural’ landscape.

Concerning the uses of the rooms, some additional observations can be made: chambers like Room 14 in the ‘villa’ at Hagia Triada\textsuperscript{88} (fig. 9) were presumably designed to accommodate single persons or a few individuals, whereas rooms like the Room of the Frescoes in the North House at the Stratigraphical Museum Site at Knossos could accommodate groups of persons, if not the paved square only was intended for standing

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\textsuperscript{79} Cf. German 2005, 34–49, 85–94.


\textsuperscript{82} Angelopoulou 2000, 547–49; Chapin 2004, 53; Panagiotopoulos 2008, 136.

\textsuperscript{83} The only well-preserved Cretan example is provided by the Stepped Pavilion of the Knossian Caravanserai, where a \textit{polythyron} is simulated by means of painted pier-and-door partitions, see Palyvou 2000, 425–27, fig. 12; Shaw 2005, 91–111.

\textsuperscript{84} For the House of the Frescoes see Chapin and Shaw 2006. A similar position can be assumed for the floral fresco from Room P in the Unexplored Mansion and for the Blue Monkey Fresco from the palace at Knossos, cf. Cameron 1984, 128, 132. The Blue Monkey Fresco might have decorated more private rooms in the earliest period of the New Palace, thus being contemporary with, or slightly earlier than, the natural scenes decorating the rooms in the ‘villas’, see Macdonald 2002, esp. 52; for an early dating of the fresco see also Hood 2005, 62. Natural scenes also decorated the walls of the northern hall complexes in the Neopalatial palace at Phaistos and of further rooms in the ‘villa’ at Hagia Triada, see Miliotellos 1998, 172–80 with bibliography. It goes beyond the scope of this paper to cite each find-spot of fragments referring to natural scenes; for an overview see Driessen 1989–90.

\textsuperscript{85} Cf. Miliotellos 1998, 100 with Stürmer 2001, 69–70. Apart from Hagia Triada, the painted room P in the Unexplored Mansion seems to have been of similarly small dimensions, see Chapin 1997, 12–13.

\textsuperscript{86} Cf. Palyvou 2000, 419–20; 2005, 163; Palyvou in this volume.

\textsuperscript{87} See Morgan 2005, esp. 26–27; Panagiotopoulos in this volume pp. 73–74. Cf. Laffineur 1990, 248–49.

\textsuperscript{88} For an illustration of the painting on the south wall of this room see Panagiotopoulos in this volume p. 69, fig. 6.
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In both cases, certain architectural features in the floors, such as a dais in the North-West corner of Room 14 and perhaps the gypsum slabs in the Room of the Frescoes, probably served as focal points for specific activities. In at least two wall paintings, namely those in Room 14 at Hagia Triada and in the Room of the Frescoes in the North House at Knossos, female figures are shown performing activities in an environment characterised by various kinds of flowers. It may be argued that the natural landscape was considered to be the ideal and appropriate place for these activities. The theory of “idealness” becomes even more credible when one considers the pictorial composition. Artificial creation opened up new possibilities in inventing, composing, and arranging natural regions, plant forms, and animals. Tapping this potential resulted in the construction of a holistic synopsis of plant forms in the sense of both depicting a deliberate choice of plant forms which were particularly relevant and had a specific meaning, and combining plant forms which actually blossom in different natural environments and at various times of the year. It has been frequently argued, therefore, that the Minoan landscape scenes represented in an abbreviated, but nonetheless hybridised, manner the whole cycle of the year and the totality of nature in its manifold appearance, perhaps with the intention of reinforcing “a sense of divine abundance.” The sacred or religious character of these landscape scenes has further been pointed out on the basis of the occurrence and role of the plants depicted in other pictorial contexts, particularly those representing Minoan cult practice. It may therefore be supposed that the depictions of natural landscapes on the walls of certain rooms were associated with the intention of creating places for cultic-ritual performances which were highly idealised to correspond to expectations of a particular environment.

In this respect, paintings with human presence seem to hardly differ from those without and the impression emerges that in both cases the natural scenes were based on similar concepts. Furthermore, the role of the natural landscape indicating the venue for certain activities in the figural scenes may have been implied in the non-figural scenes as well. Although the fragmentary nature of most of the natural landscapes prevents us from ascertaining whether the frescoes were limited to one wall or extended onto two or more walls, an analogy with Room 14 at Hagia Triada as well as adoptions of these decorative schemes in Akrotiri on Thera render the latter case more probable. The enclosing composition of the natural scenes points to the intention of creating and using locations surrounded by, and thus conceptually placed within, a natural environment. It can therefore be argued that the Bild-Raum construct consisting of an artificial landscape and human actor(s) placed within were based on sociocultural ideas stipulating a ‘holistic’ natural environment as the appropriate

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90 Militello 1992, 102 with n. 6 (E–W) × 0.80 m, elevation: 9 cm). For the position of the dais “all’estremità NE” see Militello 1998, 358, n. 11. For the finds see Halbherr et al. 1977, 93–95, among them the upper part of a bronze figurine with hand-to-front gesture was recorded. Rehak (1997, 165), however, recommends caution since the objects could have fallen from the upper storey. On the gypsum slabs in the Room of the Frescoes see Warren 2005, 131–32, with fig. 8.1. Note that, as shown in figs. 8.2 and 8.3, the find spot (area D) of the representation of “structure or columns” corresponds approximately to the position of the gypsum slabs. Could it have been the intention to create a ‘parallel’ illustration of the activities performed in the room and in front of a specific focal point?


93 Beckmann 2006, 75; Panagiotopoulos 2008, 135–36.


place for the performance of the respective activities. The existence of such artificially produced natural places in palaces and ‘villas’ argues for the practice of corresponding activities by persons having access to the decorated rooms. Furthermore, a corresponding proliferation of natural scenes in wall paintings and the ‘palatial architectural style’ suggests a close relationship of these practices with the beliefs and ideology of the MM IIIB to LM I periods.

Considering these practices or at least the motifs representing the ideas connected with them, the few extant natural scenes including human figures may be examined with regard to their reference to shared underlying concepts. On the northern and eastern wall of Room 14 in the ‘villa’ at Hagia Triada, there were most likely depictions of a female figure kneeling beside a boulder and a second female figure dancing (?) next to an architectural structure (fig. 9). Far less well preserved are the female figures from the Room of the Frescoes in the North House at the Stratigraphical Museum Site at Knossos. There, female figures seem to have been acting in a natural landscape as well as in the presence of an architectural structure. Constellations of both female and male figures acting in an environment containing natural features such as boulders as well as architectural structures or tree-shrines are a well-known topos in Minoan glyptic images of the Neopalatial period (igs. 10a–d). It can be no coincidence, that these images, which are often executed in the so-called naturalistic style, were only produced in this period, and thus correspond chronologically to the use of the rooms painted with nature scenes. It can be argued again that the same notion which envisioned humans performing ritual activities with reference to architectural structures formed the concept underlying both the pictorial representations on small-scale media and the constitution of the Bild-Raum construct within certain rooms in palaces and ‘villas’. In Bild-Raum constructs which included the artificial presence of female figures, these seem to have emblematically reflected the ritual activities performed by real persons in the room, with both real and artificial persons being oriented towards the architectural structure and placed within a natural landscape. In this way, presumed shrine-structures like those on the walls of Room 14 or the Room of the Frescoes, horns of consecration, enthroned goddesses or other objects often focused in glyptic images became part of the Bild-Raum, and were present and available to be used as foci of ritual activity. In

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97 It is, however, not necessarily what N. Marinatos (1984, 94) had in mind when she described landscape scenes as “a backdrop for ritual action serving a function similar to that of a scenic backdrop in a theatre in front of which the plot develops”. Regarding the size of the rooms, it seems to have been mainly by the actors and to a lesser extent by the spectators that the background was perceived as pinpointing the right place. See also Panagiotopoulos 2008, 138.
98 Driessen 1989–90.
100 Warren 2005, 132, 144–46.
101 Militello 1998, 271–73, pls. 3A, 4; Warren 2005, 132, 144–46. See the focal position of the tree-shrine in the lustral basin of building Xesté 3, Vlachopoulos 2008, 456, fig. 41.10; 465, fig. 41.51.
102 Horns of consecration are painted in a focal position on the wall of the northern lustral basin in the Zakros palace; see Platonos 1990.
103 In Room 3 on the upper floor of building Xesté 3, the ‘enthroned goddess’ on the wall behind the pier-and-door partition may also have served as the focus of certain activities; see Vlachopoulos 2008, 458, fig. 41.21; 465, fig. 41.51. It is tempting to see this latter Bild-Raum construct reflected in pictorial representations showing human figures approaching enthroned females and thus referring to related concepts; see, e.g., CMS I, no. 101; II.7, no. 8; II.8, no. 268; V, no. 199; XI, no. 30. The placing of the throne in the Knossian Throne Room as seen from the anteroom may be regarded another example of this spatial arrangement and its pictorial visualisation, which lasted, due to its powerful associations, until the end of the palace, see Günkel-Maschek (forthcoming). On the symbolism of the wall-decoration flanking the throne see Niemeier 1986, 84–88.
Bild-Raum constructs without either human presence or architectural structures, however, it was the intention of creating a place within a natural landscape that served as an appropriate location for the performance of ritual activities without an actual focal point.

A further point can be raised concerning the glyptic images. Although elements such as trees or flying butterflies indicate a natural location, the artificial ground line which is part of many of these scenes may be understood as pointing to the architectural reality of the environment\(^{104}\) (fig. 10). For example, the natural landscape which is probably depicted on the wall of Room 14 in the ‘villa’ at Hagia Triada showing a person kneeling beside a boulder mirrored the activities performed within the room. This same person kneeling beside a boulder, however, in highly condensed glyptic images was set in a constructed environment\(^ {105}\). The same applies to the motifs of ritual activity oriented towards an architectural structure or ‘tree-shrine’ – a motif often combined with figures kneeling beside a boulder. As shown on the walls of Room 14 in the ‘villa’ at Hagia Triada and of the Room of the Frescoes in the North House at Knossos, the activities oriented towards an architectural structure were located in a natural landscape, whereas in the glyptic images they often are not. The comparison of these glyptic images with the Bild-Raum constructs in the buildings thus reveals a highly elaborate way of conceiving and representing this form of Neopalatial ritual practice: as predetermined by their conceptual framework, these activities were supposed to be located outdoors, but in reality the natural environment was an integrated and artificially created part of the built environment of the ‘villas’ and palaces, where the venues of the related activities can be assumed\(^ {106} \). Furthermore, the evidence of both the wall paintings and the glyptic images suggests that the ritual activities performed in the decorated rooms were the ritual activities evoked by the male and female figures kneeling beside a boulder or ‘shaking’ a tree and the ‘dancing’ female figures in the visual language. In this sense, the persons exhibiting and using the associated motifs on the rings characterised themselves as the ones, who performed and/or supervised the practices conceptually associated to these motifs in the ‘natural’ places located within the palaces and ‘villas’ in the Neopalatial period. With the destruction of the ‘villas’ and most of the palaces at the end of LM IB, landscape scenes and the rooms they decorated disappeared, and with them the practices they were created for.

### 3. Summary

In this paper, three case studies have been presented to exemplify the application of a theoretical method based on an analytical framework labelled a Bild-Raum construct. According to the underlying hypothesis, the constitution of Bild-Raum constructs in Minoan buildings was based on sociocultural ideas and structures which also formed the ideological basis of depictions of human figures involved in performances at certain places. The aim of this paper was to analyse the role of wall paintings as integrated parts of Bild-Raum constructs and significant contributors to the understanding of ideas and practices associated with certain architecturally defined places. With reference to halls with friezes of running spirals, entrance areas provided with the motif of the bull, and rooms painted with natural scenes, an iconographic analysis of the motifs depicted on the walls and their appearance on other media was effected, and an attempt was made to evaluate the inter-relationships between artificially presented ideas, architecture, and practice.

It has been argued that the running spiral, despite its supposed ubiquitousness, seems to have exhibited a rather limited range of possibilities in combination with other pictorial elements and motifs when these were integrated in glyptic images or applied on certain objects. With regard to the contexts in which the spiral occurred, an association with the double axe on the one hand, and with primarily male-oriented affairs on the other hand has been emphasized. Pictorial contexts like bull-leaping and martial display suggest that it was the male members of the palatial elite who stood in a specific relationship to architectural units embellished

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\(^{104}\) CMS I, no. 127; II.3, no. 114; II.6, no. 1; V Suppl. 1B, no. 114; VI, nos. 278, 281; Sakellarakis – Sapouna-Sakellariki 1997, 655, fig. 722. Cf. for a related argumentation Blakolmer 2010, 95–96 and in this volume pp. 86–87.

\(^{105}\) CMS II.3, no. 114; VI, no. 278; Sakellarakis – Sapouna-Sakellariki 1997, 655, fig. 722.

\(^{106}\) See further Blakolmer 2010 on the function of architectural elements in glyptic images. See also Hitchcock 2007 and M.A.S. Cameron (cited in Niemeier 1986, 90) for the transference of outdoor cults into the built environment.
with spiral friezes executed, inter alios, at Neopalatial Zakros and at Final Palatial Knossos. At these same places, the presence of the double axe symbol points to the cultic aspect of the halls and overlays the Bild-Raum constructs with a sense of cultic-ceremonial atmosphere.

The image of the bull-leaping in the Southwest Entrance of the palace at Knossos has been interpreted as a visual device providing, with its emblematical and focal motif, a meaningful connotation to the Bild-Raum construct of the entrance area. It referred to a very ancient theme, deeply rooted in Cretan Bronze age ritual, which, at least from Neopalatial period onwards, was exploited by the palace at Knossos as a motif representative of both the palace itself and of the Knossian elite.

Finally, natural scenes depicted on the walls of rooms in ‘villas’ and palaces to create appropriate places for the performance of ritual activities were related to ritual practices depicted on small-scale media. Again, underlying concepts bringing together human figures performing ritual practices, natural landscapes, and built environments were argued to have been incorporated both in the composition of pictorial representations and in the creation of Bild-Raum constructs in certain rooms and halls within the Neopalatial buildings.

Unlike the other two kinds of Bild-Raum constructs discussed above, places designed as locations in an idealised natural landscaped disappeared after the end of LM IB. This last point may be taken as important evidence for the significance of Bild-Raum constructs and the concepts associated as reflections of current ideas and related practices which were presented and performed at distinct places. Considering images and spaces in this way, these places are still retraceable within the architectural remains of Bronze Age Crete. The study of Bild-Raum constructs may, therefore, provide important insight into the construction of meaningful environments for sociocultural practices and, thus, a new starting point for the reconstruction of Minoan realities.

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107 With regard to the East Wing Marinatos (1996, 154) already noted “a larger concentration of what I would call male oriented iconography”.
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The brief we were given for this workshop was to start off with theory and then approach the visual and architectural remains. So this paper implies a very large ‘what if?’ related to Minoan social structure. What if Minoan society was, till the advanced Neopalatial period, a mainly matrilineal and matrilocal House society? The basic premise of this paper, as has been argued elsewhere, is that an intergenerational investment by a corporate group in an estate constituted by an architectural structure, its domain, its heirlooms and valuables formed the basis of Minoan social relations. The implication is that society was essentially composed not of nuclear families (although these also existed) but of larger groups which stood in an intimate relationship to a residential structure that even in its physical appearance played an important social role. Since matrilocal residence is recurrent in ethnographically attested cases of House societies, and matrilocal societies frequently have significantly larger dwellings than patrilocal societies, I argued that this could explain the considerable size of Minoan residences from the Neolithic onwards. This would then imply that membership of the residential group would have been traced through the female line with, after marriage, the woman continuing to reside in the house where she was born but her husband moving in with her. In general, matrilineal descent and matrilocal residence are considered as allowing a higher status to women since the bride remains in her original residence from which she draws economical and social support. It is certainly not my intention to argue for some kind of matriarchate or a society dominated by women as has often been done in the past or in New Age literature and as Evans assumed at some stage. To the contrary, in most cases of matriliney, men wield the power and it is especially the brother of a woman (i.e. the mother’s brother) rather than her husband who is the most important male. Indeed, he is a respected person of authority, and the children of his sister, rather than his own children, are his heirs and successors. This is stressed by the attention given to the representation of men – young, muscular and occupied by hunting, boxing, bull sports and what Voss calls “strategic clothing that highlights the penis as it conceals it”. This suggests a concern with homoerotic display for socially dominant males. A matrilineal descent-matrilocal residence society does imply, however, that women had a special position and were involved in certain aspects of public life. This paper is therefore not concerned with day-to-day female occupations and their architectural context, although this too seems a promising avenue to pursue especially for the advanced Bronze Age. We have attempted to explore this briefly elsewhere, especially where Postpalatial Quartier Nu at Malia is concerned, and, starting with Evans, others have, on the basis of particular archaeological features such as loom weights or kitchen equipment, attempted to reconstruct areas in which women were especially occupied on a less mundane basis.

* Inspired by ‘cherchez la femme’, a famous phrase coined by Alexandre Dumas, Les Mohicans de Paris (1871, 232). While preparing this paper for publication, I came across Gere (2009) who discusses related issues, especially on pp. 76–82. I thank Florence Gaignerot, Donald Haggis and Quentin Letesson for constructive comments, and Diamantis Panagiotopoulos and Ute Günkel-Maschek for organising the workshop and the invitation to participate.

1 Driessen 2010a; 2010b; 2011.
2 Spain 1992, 22; Blumberg 1984.
4 See Evans 1930, 58: “a sign of female predominance characteristic of the matriarchal stage” and again p. 227: “Women among the Minoans […] took the higher rank in Society, just as their great Goddess took the place later assigned to Zeus”.
5 Voss 2007, 56.
7 Driessen et al. 2008, 102.
8 Evans 1902, 94 for the identification of women’s chambers on the basis of loom weights in the southeast part of the Knossos palace.
1. Public female roles

I am hence especially interested in the environment and setting of public female roles. I feel strengthened in this type of quest by the recent work of Alberti, Chapin, Kopaka, Marinatos, Nikolaidou, and Rehak, to mention only a few. Gender relations were indeed high on the agenda of a conference just published as *Aegaeum* volume 30 *FYLO. Engendering Prehistoric ‘Stratigraphies’ in the Aegean and the Mediterranean*, and there are now even suggestions for the existence of transgendersed individuals such as white bull leapers. Most contributors to the *FYLO* volume emphasized how motherhood was not deemed important as a topic for Minoan iconography and that erotic depictions are also generally lacking from Minoan art. Naked breasts, however, could conceivably convey the latter.

Evidence for public roles carried out by women is unfortunately rather limited. Funerary data are either absent or suspect and only from LM II onwards can we see that some women had special status in society as best illustrated by one of the Archane burialss. Some have argued that the Prepalatial gold diadems such as those found at Mochlos were carried by women and hence the tombs in which they were found could have been occupied by high status females. I am more hesitant on this because there is evidence to show that many valuable objects did not accompany the dead on burial but were offered at secondary deposition, and represent group concerns rather than personal status. On the basis of evidence from some Postpalatial tombs, A.-L. D’Agata suggested that kylikes may have been used by males and champagne cups by females and it is more than likely that some specific objects were considered gendered during particular ceremonies, but very little work has been done on this for Minoan Crete. There is, of course, a series of rhytons especially dating to the Pre-and Protopalatial periods, that carry female attributes and may have had some link with fertility which at least seem to stress a female rather than a male element in specific rituals. All this is highly suggestive but does not bring us very far. We are on firmer ground when it comes to iconography and architecture, with convenient corpora made by Wingerath and Nörling where the iconography of the human figure and architecture is concerned. There is a proviso, however. All authors underline the almost sudden arrival of figurative frescoes in Minoan art. This is evidently also repeated in other types of artistic impressions since human figures are extremely rare before the Neopalatial period, apart from terracotta votives. One of the reasons could be that taboos existed on such representations, especially of the divine, or – and I would rather opt for this solution – that humanised divine figures were a late arrival on the Minoan scene, replacing ancestor cults, on the one hand, and being incorporated into existing shamanistic rituals, on the other. In any case, the implication is that iconographic evidence that may illuminate us especially relates to the Neopalatial period.

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11 Chapin 2007; 2011.
12 Kopaka 2009b.
14 Nikolaidou 2002.
15 Rehak 1998.
16 Kopaka 2009a.
18 Morris 2009, 246–47.
19 Sakellarakis and Sapouna-Sakellari 1997, 185; cf. also Whitley 1996 for interesting remarks.
20 Davaras 1975, 114; Maggidis 1994, 81; but see Soles 1988, 61, n. 3.
21 See my argument in Driessen 2010b.
23 Koehl 2006, 18.
26 Blakolmer 2010.
1.1. The Room of the Lady Seat

We may perhaps start with a little historiography. Evans, brought up in Victorian England, varied between a very pro-women position to one that may be described as almost misogynistic. From the very first season of excavations at Knossos, he already gendered some of the architectural spaces he discovered: the presence of a fine gypsum seat in the so-called Throne Room as against a seat “in which the hollowed space was larger” in a nearby room made him decide that the latter “was intended for a woman, while the seat of the throne seems better adapted for a man” (fig. 1). Evans’ Victorian attitudes need not concern us here but in a footnote of the same report, he adds that the popularity of female iconography could “favour the view that a queen had occupied the throne”, an alternative then preferred by his German colleague Wolters, but dismissed by Evans himself because “the masks on the royal tombs of Mycenae were of the male sex”. Hence the Room of the Lady Seat was born and a duality in gender introduced within Minoan architecture. The next season, a similarly hollowed-out seat was found in another room nearby and “therefore belonging to a person of the female sex, the Mycenaean women, as distinguished from the men, being often depicted in a more or less squatting attitude” (fig. 2).

When, in 1902, the Domestic Quarter at Knossos was explored, Evans was convinced to have found “the centres of domestic and family life of the Palace”, adding that there was no question of “a rigorous separation of the sexes in the ‘House of Minôs’.”

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29 Evans 1900, 38.
30 Evans 1900, 42, n. 1.
32 Evans 1901, 31.
33 Evans 1902, 45.
34 Evans 1902, 45.
Close to the Hall of the Double Axes, “the distinctive name of the ‘Queen’s megaron’ has been accordingly given here to the most stately withdrawing room of this region”\(^{35}\). The report, published 20 years later in *Palace of Minos*, repeats the argument:

“A strong suspicion must exist that this Upper Hall, with its private stairs leading to the ‘Queen’s Megaron’ below – itself, as will be shown, of feminine association – was a large, semi-public withdrawing room largely devoted to women’s use. It would have been thus a necessary complement to the Hall below, the prevailing male character of which, as we have seen, asserted itself in the suspended shields. There are many reasons for believing that harem life in the Oriental sense was unknown to the Minoans, but though, as we see from the groups of women among the men who crowd the front enclosure of the Grand Stands of the Miniature Frescoes, the intermixing of the sexes was to a certain extent customary, we find the ladies entitled to the honorary seclusion of front seats. There was thus a partial and regulated segregation of the two sexes.”\(^{36}\)

It should be added that the ‘feminine association’ alluded to by Evans was based on the “proportionally lower benches”\(^{37}\) whereas in the Annual of 1902 it was still “there is no reason to suppose that the benches in the Queen’s Megaron were reserved specially for women”\(^{38}\). It can be suspected (but was never explicitly stated) that two famous frescoes found here, that of the Dancing Girl and the Dolphin Fresco, as well as part of a moulded relief bird and the presence of a fragmentary bathtub originally assumed to come from a small room decorated with veined gypsum and spiral fresco, similar in size and plan to already known lustral basins but without being sunken, helped Evans in his interpretation to see this part of the palace as reserved for women. This was reinforced by what he assumed to be a toilet in one of the inner rooms and by the presence of peculiar mason’s marks identified as distaffs seen as “a distinguishing mark of the chambers somewhat specially set apart for women”\(^{39}\). He was not always followed in this interpretation. Lawrence\(^{40}\), for example, already reacted against the naming of the ‘Queen’s Megaron’: “The name is totally unjustifiable. There is, in

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\(^{35}\) Evans 1902, 45 (my italics).
\(^{36}\) Evans 1930, 296.
\(^{37}\) Evans 1930, 296, n. 1.
\(^{38}\) Evans 1902, 50.
\(^{39}\) Evans 1902, 65.
\(^{40}\) Lawrence 1957, 39.
fact, no indication that they were specifically women’s quarters; they were little more secluded than the others”. But in a major study on Minoan architecture by J.W. Graham, Evans’ ideas were largely maintained. Graham proposed that a separation between the sexes existed and suggested that the Minoan Hall, a very Minoan way of opening a space and sometimes attested more than once in a single architectural structure, might have been used exclusively by one or the other sex. Hence his identification of a Men’s Hall and a Women’s Hall in a series of prestigious buildings (table 1).

<table>
<thead>
<tr>
<th>Site</th>
<th>Men’s Hall</th>
<th>Women’s Hall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knossos Palace</td>
<td>Hall of Double Axes</td>
<td>Queen’s Hall</td>
</tr>
<tr>
<td>Phaistos Palace</td>
<td>Rooms 77–79; Rooms 63–64</td>
<td>Room 81; Room 63b</td>
</tr>
<tr>
<td>Malia Palace</td>
<td>Room III7</td>
<td>Room III1</td>
</tr>
<tr>
<td>Zakros Palace</td>
<td>Room XXXVIII</td>
<td>Room XXXVI</td>
</tr>
<tr>
<td>Hagia Triada Villa</td>
<td>Rooms 3–12</td>
<td>Room 13</td>
</tr>
<tr>
<td>Knossos Little Palace</td>
<td>Main Hall system</td>
<td>Absent</td>
</tr>
<tr>
<td>Malia House Da</td>
<td>Room 3</td>
<td>Room 6</td>
</tr>
<tr>
<td>Malia House Za</td>
<td>Room 12</td>
<td>Room 5</td>
</tr>
<tr>
<td>Nirou Chani</td>
<td>Room 2a</td>
<td>Room 5</td>
</tr>
<tr>
<td>Tylissos A</td>
<td>Room 6</td>
<td>Absent</td>
</tr>
<tr>
<td>Tylissos C</td>
<td>Room 15</td>
<td>Room 14</td>
</tr>
</tbody>
</table>

Table 1 Men and Women’s Halls in Minoan Architecture (based on Graham 1962).

How he arrived at this interpretation is not specifically stated. We learn that he thought the halls were best suited to be living quarters and “more simply, and to bring it into line with the similar rooms in the other palaces, we may term it the Men’s Hall, for such it must have been, though this is not meant to exclude the probability that women also used the room”. A similar observation is made for the Women’s Hall: “This and the attached rooms were no doubt not exclusively used by the women […] but since they must have been used particularly by the women we may, for the sake of convenience, continue to employ the terms ‘Queen’s’ or ‘Women’s Hall’, or ‘Apartments’.”

“It is evident that the living quarters in the Minoan palaces follow the general pattern of contemporary Cretan houses of the well-to-do classes, though of course on a larger and more luxurious scale – or should we say that the houses ape the palaces in this respect? One is left with the impression that the design of the royal apartments was based on long experience and on a fine understanding of, and regard for, the needs of the two sexes in their domestic relationships.”

In a way, Evans and Graham were both trying to gender architectural space but focusing exclusively on domestic rather than ceremonial contexts. Even the appellation Domestic Quarter or Residential Quarter betrays their traditional way of thinking of Minoan society as made up of kings and queens, necessitating private apartments in the royal residences or elite buildings.

Since these views were published, more research has been done on the divisions in age and gender that characterise Minoan and especially Theran society and several studies have concentrated on the internal organisation of Minoan structures so we can perhaps look at this problem again. Before returning to gendered space, it is perhaps appropriate to summarise the work of some scholars addressing iconographic evidence first. Blakolmer has first stressed that frescoes and colored wall paintings in general are never used

42 Graham 1962, 86.
43 Graham 1962, 87–88, n. 5.
44 Graham 1962, 93.
45 E.g. Doumas 2000.
‘discriminately’ but always to reinforce a ritual and ceremonial function. This is corroborated by other specialists and in particular by N. Marinatos to whom we owe some enlightening papers on the representation of women such as The Minoan Harem and Role and Sex Division in Ritual Scenes of Aegean Art. She already stressed that “the sexes almost never mingle in the performance of ritual. Women and men are segregated and perform their cult activities separately. This suggests that there were role divisions which were accentuated in the ritual sphere.” Marinatos underlined that the spectators in the Sacred Grove and Dance fresco, for example, consisted of intermingling men and women whereas the moment either of them were involved in ritual action, they no longer mixed (fig. 3). Men, of course, also participated in rituals but these are of a different nature and context altogether and do not concern us here. For Marinatos, this meant that gender was determinative in structuring Minoan society. H. Wingerath was less convinced but also underlined that each gender seems to have had its own rituals, women specifically cult dances, men specifically bull leaping and tribute bearing, but both being as important in the realm of iconography. M. Zeimbekis also stressed how “relations between men and women varied significantly from one ritual and cultural context to another – each with its own set of rules about correct ‘bodily comportment’ for these genders.”

**Fig. 3** Reconstruction drawing of the Sacred Grove and Dance fresco from Knossos, clearly separating genders among participants and spectators (redrawn by D. Riccardi-Percy).

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47 Blakolmer 2010.
49 Marinatos 1987.
50 Marinatos 1987, 23.
51 Marinatos 1987, 25.
52 Wingerath 1995, 153.
And, in a paper for the 10\textsuperscript{th} Cretological Congress at Chania entitled \textit{Gender and Coalitional Power in the Miniature Frescoes of Crete}, A. Chapin also concludes that:

“the evidence for gendered social relations depicted in the miniature frescoes from Knossos and Thera suggests that Aegean power and authority relied on coalitional success. When the active players are women, the successful group is depicted in an egalitarian manner consistent with average female relations, and when men dominate the action, the coalitions appear to be hierarchical and competitive. Yet neither male nor female forms of gendered social relations express authority individually. No image of a king or queen emerges from the study of Aegean miniature frescoes. Rather, power and prestige in Aegean Neopalatial society seem to derive from the strength of its successful coalitions.”

Indeed, the iconographic evidence suggests that women, and perhaps especially senior women, possessed agency and authority in public ceremonies\textsuperscript{55}. What is interesting for our purpose is that these gendered differences allow us to focus on the \textit{actual loci of ceremonial activities}\textsuperscript{56}. Wingerath’s study on the human figure in Minoan art underlined that women occur in iconography only in ritual and ceremonial aspects, never in situations of common life as men do\textsuperscript{57}. This is, for example, a serious difference between Crete and Bronze Age Cyprus where representational data were used by J. Webb to show how women were represented as “active agents in one or other of three major capacities – as lovers or partners, as mothers (or child-minders) and as a source of productive labor”\textsuperscript{58}. Indeed, on Cyprus, all representations of grinding, pounding, baking and perhaps pot-making involve women. Such representational evidence can then be checked with artefacts and facilities within the residences to identify gender relations. The absence (or scarcity)\textsuperscript{59} of such imagery on Minoan Crete does not mean that women did not engage in these activities of course but that they were not deemed important enough to be represented whereas ceremonial activities were. If then our iconographic evidence shows women in action in ritual contexts \textit{separate} from men, why not try to find ritual distinctions also in public and semi-public buildings, in the actual loci of ceremonial activities. Were there gendered ritual environments as seems suggested by the iconographic evidence?

\textbf{1.2. Women in Action}

What seems clear from Minoan iconographic evidence is that ritual actions very often took place outside, with architectural and natural elements especially forming a background or a frame for the \textit{performance}. Indeed, performance seems to be the key word, since \textit{dancing} may have been one of the major ceremonies in which women were involved\textsuperscript{60}. Performances most often involve observers or a public which was at least passively engaged, and the rituals were meant to impress a crowd. The miniature fresco from Tylissos illustrates this point but many dozens of examples exist\textsuperscript{61}. The association between women and raised walks, as suggested by one of the miniature frescoes may imply that the West Court (as most assume\textsuperscript{62}) or the Theatral Area (as Evans proposed\textsuperscript{63}), formed one of the prime stages for performative ceremonies in which specific women played a major role but at which also other men and women assisted, either as spectators or as minor players. Most other scenes, either on rings, sealstones or frescoes involving women seem to take place either in the middle of nature as suggested by specific natural elements (trees, rocks), or with architectural facades and portals as backdrops. The same may be said for women and men involved in bull-leaping rituals. Scenes involving women taking place inside are, however, more difficult to find.

\begin{thebibliography}{99}
\footnotesize
\item \textsuperscript{54} Chapin 2011, 519.
\item \textsuperscript{55} Compare with Reeves Sanday 2002; Mathieu 2003.
\item \textsuperscript{56} Zeimbekis 2009, 152.
\item \textsuperscript{57} Wingerath 1995, 151.
\item \textsuperscript{58} Webb 2002, 93.
\item \textsuperscript{59} For some examples, however, see Nikolaidou 2002, 88–89.
\item \textsuperscript{60} Cf. Garfunkel 2003; Liveri 2008.
\item \textsuperscript{61} Shaw 1972.
\item \textsuperscript{62} Cf. Letesson and Vansteenhuyse 2006, 104.
\item \textsuperscript{63} Evans 1902, 111.
\end{thebibliography}
We may draw attention to the tripartite platform on which the Akrotiri goddess is seated. A similar platform has been reconstructed for the Hagia Triada goddess and could be also suggested for a missing goddess originally associated with the Anissos frescoes or perhaps for the one from Pseira. Some seals also show such a platform. It is a possibility (but no more than that) that this tripartite platform had a connection with the tripartite shrine, as shown by the miniature fresco, perhaps by the Zakros rhyton, the Mycenae and Volos gold plaques and, as I believe, the archaeological remains at Vathypetro and Mitropolis-Kannia.

A link with women is suggested (at least by some reconstructions) by the importance given to the female participants in the Grand Stand Fresco (fig. 4). We could at least suspect that in real life women also played a special role in such architectural contexts. Again, the presence of natural elements, courts and especially large crowds may imply that these ceremonies too happened especially often outside. The connection between heraldically posed animals and thrones is regarded by some, starting with Reusch, as evidence that the Throne Room at Knossos (and perhaps elsewhere) served for the enactment of rituals centring around the Minoan Goddess during which a priestess took place on the throne which, I remind you, Evans attributed to Minos, because too small to fit a female bottom! From this brief review, it seems clear, however, that women had a special role either as participants or spectators in particular religious ceremonies that were held in the open either in the countryside or in close association with monumental public architecture.

Ceremonial scenes involving women possibly taking place inside are more difficult to find. That a specific architectural environment was sometimes intended where men are concerned, is suggested by the discrete presence of encoded features like pillars, as on the Boxer Rhyton from Hagia Triada. Where women are concerned, there are several frescoes that show women, especially of larger scale, without sufficient detail.
around them preserved as to be useful (e.g. Women in Blue, Dancing Girl, etc.) but there are also a few representations, especially from Knossos, showing women behind balustrades, in windows or on balconies (figs. 5a–b).

The first fragment, from the North Fresco Heap, shows three women standing behind some kind of an opening, framed by wooden bars. Another fragment from the Area of the Miniature Frescoes shows a standing woman on the balcony of a structure. The latter fragment is interesting in showing architectural details that recur elsewhere, without women associated. Assuming that these representations depict specific ceremonies, it is most likely that these women represent spectators of bull leaping scenes, as M. Shaw has argued on the basis of evidence from Mycenae, in close connection with a tripartite shrine (fig. 6). So even such scenes seem indirectly linked with performances taking place outside.

**Fig. 5**  
*a*: Knossos: fragment found in the North Fresco Heap (after Evans 1928, 602, fig. 375); *b*: fragment from the Area of the Miniature Frescoes shows a standing woman on the balcony of a structure (after Evans 1928, 603, fig. 376).

**Fig. 6**  
Reconstruction drawing of the Fresco from the Ramp House of Mycenae, stressing females among participants of bull games (after Shaw 1996, pl. B3).

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72 Evans 1928, 603, fig. 376; 1930, 59, fig. 35.
73 Shaw 1996.
2. The House in Action

“The Bushmen […] have the rule that the fire in front of their huts has a male and a female side. Males should sit on the male side and females on the female side […]. Such conceptions of space are not confined to foreign cultures. Our churches were not long ago organized with a male and a female side, as well as a sacral end (the choir) opposed to a profane end.”

Recent research on Classical Athens has shown that, rather than an assumed division between women’s quarters and andron – the men’s quarter –, most plans should now be interpreted as reflecting a separation between a reception space and a household space, often with a separate entrance with the first used by resident and visiting males, the second by resident males and females. Still and although we cannot be sure that the Minoan iconographic evidence relating to out-door space activities and rules that engaged participants in extra-mural actions were the same as those directing intra-house relationships, I would think, on the basis of anthropological parallels, that it is relatively safe to assume that the gender separation we observe during outside rituals was maintained to some degree during in-house ceremonies. The domestic sphere was, in most societies, the prime

“arena for age and sex roles, for forging kin solidarity, for socialization and economic cooperation. It is therefore, apparent that, beyond possibilities offered by the design and furnishing of rooms for the spatial and temporal ordering of domestic activities, the way different households organize household chores, both routine and ceremonial, is related to gender, age, socio-economic status and kinship structure of the inhabitants and their interpretation of roles, routines and rituals. The household’s choice in turn, is circumscribed by the larger external socioeconomic order. This is then manifested in the overall settlement morphology.”

This would imply that public performances were, to some measure, the reflection of what happened at a smaller scale. The implication is that Minoan residential structures were likewise used to stage specific ceremonies. This was already noticed by Evans, especially when remarking the presence of portable ritual objects and permanent installations in a series of Knossian domestic buildings. Spaces in which such features have been encountered are usually identified as domestic shrines. This seems somewhat reductive since there is little reason to see a separation within Minoan society between the religious and the secular. Seeing residential structures as having multiple identities is certainly more appropriate. Letesson argues that

“the very existence of such external transition spaces underlines the fact that the contacts between the inside and outside of Minoan buildings were potentially so frequent and/or necessary that they needed to be tightly monitored. Indeed they suggest frequent, planned encounters that formed integral parts of the social dynamics, tightly controlled and channeled through space.”

Moreover he underlines that “the activities that were performed with wall paintings as focal points were most likely exclusive and these rooms were only accessible to certain categories of people via a potentially tightly controlled circulation route.” The similarity between circulation patterns in palatial buildings and domestic structures as noted especially by Palyvou, Romanou and Letesson, suggests that the performance of rituals was essential for both types of construction. As much as there was a continuum between different scales of architectural forms, there must have been a ritual continuum. In her innovative study of Batammaliba architecture in Africa, Preston Blier notes how, when certain funeral ceremonies have to be performed within and around the house:

“The role of architecture is critical because the house serves as staging for much of the action […]. Batammaliba houses, in their roles as performance staging areas, utilize their diverse identities to give deeper meaning to the

76 Balakrishna Menon 1998, 70.
78 For a list see Gesell 1985.
79 Letesson this volume p. 29.
80 Letesson this volume p. 48.
82 Romanou 2007.
dramatic action taking place within them. Each house’s theatrical role in turn impacts on its nontheatrical functioning because its dramaturgical associations are retained long after the performance has concluded [...] . The house in its residential features utilizes a variety of domestic chambers for the action sequences of each performance. Before each drama begins, the house furnishings and animals are removed to other family residences; for all but dramatic purposes, the house ceases to function as a domicile. So important is this theatrical role for each house that key design features are incorporated into it in anticipation of its role as performance stage [...]. Architectural structure, in other words, complements key features of performance structure.”

Or likewise

“Something similar is experienced by the Desana of South America when they drink a brew made from the hallucinogenic vine yajé. The house becomes the universe during the ritual so that the men’s door becomes the eastern entrance to the earth we inhabit. The house is thus transformed by people’s altered consciousness; what they had built for daily use becomes an exemplar of the cosmos and movement through it becomes equivalent to movement through the cosmos.”

If Minoan residential structures were indeed stages for performances, are we allowed to look for female and/or male architectural contexts for the performance of such ceremonies, whether or not combined with or in contrast to normal domestic activities where this separation may or may not have been maintained? There are plenty of anthropological parallels illustrating how residential structures, especially those that fulfil a special function in society, are composed of a male and a female part, often with a central, axial corridor, as the quote which opens this paragraph illustrates\(^8^6\). Those parts are meant to cooperate to make the household viable.

“Each house is divided down the middle into two symbolically separate sections. The right (north) side of the house (i.e., that side closest to one’s right hand when one is positioned inside the house’s doorway facing out toward the west) is associated with women. The left (south) side of the house, again as defined when one looks out from the house portal, is identified with men [...]. On the female side of the house are located the female granary, the female crops, the shrines of game animals killed by women, and the shrine of the women’s initiation god. On the male (south) side of the house are located the men’s granary, the male crops, the shrines of the wild game killed by men, and the shrines of the men’s initiation and war gods. Each house, in its structure and organization of space, honors Kuiye by incorporating a key dimension of the god’s physiognomy, the division into male and female parts.”\(^8^7\)

Anthropological research has shown how the societal make-up can be read in the plan of the residential structures. Brusasco, for example, notes for a typical matrilocal society such as that of the Ashanti, that the female residential quarters (32, 58) were located in the shallowest space (meaning closest to the outside) “and are thus strongly oriented towards the external relations whereas the chief male residential areas (27, 33, 34, 51) are far more integrated with the inside than with the outer world”\(^8^8\). On the other hand, from a study of the Nair, it is obvious that male-oriented spaces are located on the outside since here women rule in-house relations and rituals\(^8^9\) (fig. 7).

The house was also the first object that was transferred as inheritance to women and “became the primary setting for reinforcing spatially the unique position that women of the community held”\(^9^0\). Moreover, apart from the most important male in Nair society (the brother of the most important woman), who lives in the residence, other men usually live elsewhere (duolocal) and visit the residence at night which is why many of these residences are characterised by a staircase leading to sleeping areas from the outside. Incidentally, the immediate access from outside to staircases is also something remarked for Minoan architecture and may possibly indicate two types of users, one external, one internal\(^9^1\). Especially characteristic for the Nair but also for many other matrilineal social systems is the ritual and ceremonial role of the residence with the

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\(^{84}\) Preston Blier 1987, 173.

\(^{85}\) Lewis-Williams and Pearce 2005, 65.


\(^{87}\) Preston Blier 1987, 90.

\(^{88}\) Brusasco 2004, 152.

\(^{89}\) Balakrishna Menon 1998, 120.

\(^{90}\) Balakrishna Menon 1998, 131–32.

physical structure at the same time being the symbol and the screen against which the solidarity of its members was expressed through many collective ceremonies and rituals. The longevity and size of the residence both underline the intergenerational and corporate nature of this association.

If Minoan society stands a chance of being a matrilineal and matrilocal House society, as I have argued, the implication would be that, within some large structures, different related women (sisters especially) should live together with different non-related men (the husbands of these sisters). Moreover, since the residential structure would have been inherited through the female line, the central ritual aspect of the building may well have been related to female in-house ceremonies with gender specific rituals being practiced in some of the major Minoan domestic buildings. This does not mean that men and women led separate lives within the residences, but that the ceremonial function of the residence may have been foremost linked to female performances. The implication is that in smaller residences which had less developed ceremonial functions, men and women did not lead segregated lives. Moreover, since public male- and female-oriented rituals seem relatively distinctive with especially bull-leaping, tribute bearing and perhaps communal drinking for men and dances and sacrifices especially for women, the architectural settings of performances within the residences may also have been distinctively different.

If we combine the hypothesis of a matrilocal, matrilineal House society with the fact that many Minoan residential structures had an obvious semi-public nature and were ritually charged, we may conceivably explore whether certain larger Minoan structures were internally separated into gender-specific areas, at least on occasion of certain in-house rituals. Here I return to a recent paper by K. Kopaka in which she draws attention to the existence in certain tribal societies of a woman’s house or menstrual hut. Following earlier studies by Marinatos who identified blood on the horns depicted in the sunken room of Xeste 3 at Akrotiri, Kopaka proposes to see the lustral basin as such a menstruation environment, linked to specific rites of fertility. In this case, the iconography, involving women and blood, may reinforce such a hypothesis. There is some evidence that similar practices occurred on Crete since, in the northeast wing at Zakros, red horns decorated at least one of the walls of the lustral basin (fig. 8). Moreover, following Gesell, we may play with the possibility that lustral basin 63d in the palace of Phaistos also functioned as such since real, red painted miniature horns of consecration were found in this room. M. Platonos already stressed that 16 lustral basins were located near polythyra, seven close to shrines and only two close to palace entrances. Can we go so far as to suggest that all lustral basins were specifically reserved for women and their initiation rituals? This would have an impact on our reading of the Minoan Hall, the polythyron and the Palaikastro Hall, three types of major architectural spaces that occur in connection to the lustral basin. Their association with a room specifically used for female rites could imply that they too had such an association. In a sense, I am revamping

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92 Kopaka 2009b, esp. 186.
93 Marinatos 1984, 74.
94 Gesell 2000, 955.
95 Platonos 1990.
Graham’s old hypothesis of men’s halls and women’s halls, but I am turning the argument around: Minoan residences were foremost female domains for both ritual and domestic activities centering on lustral basins and associated Minoan halls. Important House groups in general gave attention to ceremonies centring on the female whereas men may have largely been busy in alcohol consumption and bull jumping to put it crudely. If we use this dichotomy ritual/woman versus consumption/man, this may offer us a hint at the functional organisation of certain larger Minoan residential structures. House A at Tylissos (fig. 9), for example, has a south wing with a Minoan Hall and a lustral basin whereas its north wing may have carried a banqueting hall upstairs above the storerooms. This banqueting hall was immediately approachable from the outside. Houses Za (fig. 10) and Epsilon at Malia also have lustral basins attached to the more secluded areas whereas other, more easily reachable halls were more public.

Many examples exist in Minoan architecture (e.g. Malia Delta-Alpha, Tylissos Gamma, etc.). In fact, the same contrast used in the palaces between Minoan Hall or polythyron linked to lustral basins as a female area against other large, especially dining-related installations as a men’s area, may allow a different perception of the functional and gender-specific organisation of the palaces where rituals are concerned. At Knossos, for example, a lustral basin is associated with the Throne Room and the Queen’s Megaron, but there is also one in both the northwest and southeast wings, and more than one example also occurs in the palaces of Zakros and Phaistos. The areas usually identified as banqueting halls are all located in different zones of their respective buildings and these are never associated with either lustral basins or Minoan Halls. These specific types of rooms are obviously rather exceptional and are absent from most residential structures that usually show a more simple, less elaborate construction. The implication would then be that control over and participation in specific rituals was not only gender-specific but also exclusive to some corporate House groupings. At all levels, however, gender integration for domestic activities may have been the case. It may be a case in point that, in contrast to Linear B, where specific logograms for men and women have been identified, in Linear A a more generic ‘person’ symbol seems to have been used. It may be only with the Mycenaean-inspired Linear B economy that we encounter specific, segregated work forces of men and women. Still, Olsen underlines the fact that at least some women in the Knossos tablets may have had an independent economic identity in contrast to Pylos.

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98 Graham 1975.
3. Conclusions

The important role of women in ceremonies and rituals as illustrated by Minoan iconography may suggest that gender-specific architectural space for the performance of rituals formed an intrinsic part of the built environment in which social relations took place, both at a public and semi-public/semi-private level. Starting off with a hypothesis of a matrilineal and matrilocal House society, a new reading of some elaborate Minoan residential structures has been suggested, with segregated gender-specific ritual spaces. Some of the specific room types within these structures have been presented as primarily related to female ceremonies, others to male ceremonies. At the same time, it should be stressed that these residential structures formed part of a continuum of ritual expression that also included buildings interpreted as palaces. Moreover, I have underlined the apparent absence of gender segregation where normal domestic functions are concerned and in less elaborate residences.

A final observation may be given to that wretched institution and chimerical architectural form called the Cretan andreion. Westgate suggests that the simplicity and linear, unsegmented plan of Cretan Classical and Hellenistic houses can be explained by a limited semi-public social function of the residences whereas an “alternative arena for the expression of social roles” existed outside, formed by a communal system centred on the andreion. Minoan Crete, on the other hand, gave unprecedented attention to a series of residential structures, with complex access and circulation systems. The segregation of men and women and the setting apart of a male-specific architectural environment for communal dining that characterises Archaic Crete more than any other Greek region (apart from Cretan influenced Sparta) could well be a consequence of this earlier, Minoan situation. Despite the presence of male-oriented ritual space within elaborate residences, a consequence of the matrilineal and matrilocal tradition may have been that men were accustomed to unite outside of residential structures which were, especially where ceremonial functions were concerned, primarily the domain of women. Koehl argued for something similar, tracing the origin of the andreion back to the Minoan period. He hypothesised the existence of a dining and sleeping hall – andreion and klosterion – in the villas of Hagia Triada and Nirou Chani. Although his hypothesis has its merits – especially by involving the relief rhytons found in the villa reale, I think it is better to allow for a gradual development of these Iron Age institutions. Elsewhere I have argued that we should see

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100 Westgate 2007, 450–51.
101 This in contrast to Pomeroy 1975, 42: “the freedom of the […] women seems to have been a result of the Dorian tradition with its communal social structure and separation of the sexes”. See also Gere 2009, 77–78 on Bachofen and Lewis Henry Morgan who, on the basis of a testimony by Herodotos that the Lycians originated from Crete, argued that the island retained traces of a ‘matriarchal’ system and a descent in the female line.
102 Koehl 1997.
the palaces in general as integrative communal dining, ritual and ceremonial areas. I would certainly not go so far as to see the Minoan palaces as the direct ancestors of the *andreia* despite Halbherr’s and Mosso’s claims, since sufficient iconographic evidence exists to see both sexes involved in the ceremonies organised in and around the court-centred buildings. Still, if Minoan women primarily used the House for their ceremonies, palaces may, although largely integrative, have been more specifically male-oriented spaces. The destruction of the palaces and the concomitant disappearance of means of reunion for males and females would then throughout the Postpalatial period see the development first of segregated gendered ritualised and domestic spaces at all levels of society and eventually into a more preferential link between men and external, communal structures to which eventually the name ‘Men’s House’ would be given. In a sense, I suspect that the hypothesis presented by D. Spain, in her book *Gendered Spaces*, in which she suggests that “initial status differences between women and men create certain types of gendered spaces and that institutionalised spatial segregation then reinforces prevailing male advantages” applies to the Cretan situation: spatial segregation would eventually have led to gender stratification and a different social situation altogether.

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103 Driessen 2003.
104 Halbherr 1893, 111.
105 Mosso 1907, 161.
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The existing Neopalatial architectural typology, as presented by McEnroe, is mainly based on a description of the formal and conceptual traits offered by the buildings. As such, a general material and technical simplicity, most often explained as the result of physical determinism, characterises vernacular architecture in radical opposition to the so-called polite architecture. The main features of this latter style are the presence of architectural units illustrating respect for architectural trends, not unrelated to the social status of the users or inhabitants, and the use of ostentatious building materials. The visual impact of such specific choices has been stressed since the beginning of the history of Minoan archaeology, as this is clear from the oft quoted comment of Seager concerning the ashlar façade of Gournia, an edifice considered in more detail further on in this paper. Seager labelled it “a veneer of elegance to impress the passer-by”. Several studies have since considered these polite architectural features, their specific traits, their modifications and adaptations, and their diffusion, notably by taking into account the circulation – in Crete but also elsewhere in the Aegean – of itinerant craftsmen and the possible active reactions against specific ideologically-charged architectural units.

Beyond the description of the physical traits of Minoan architecture and their role in the classification of buildings into distinct categories, this essay explores a quantitative approach to Minoan architecture, based on a study of the labour costs generated by the erection of a series of buildings. This approach, sometimes dubbed ‘architectural energetics’, offers a series of estimates of the time necessary to accomplish the diverse architectural tasks involved in building an edifice. The clearing and levelling of building sites, the supply of materials – whether through collection or extraction –, their transport and finishing, the erection of walls and the making of ceilings and roofs can be studied according to the time necessary for their completion, which is usually expressed in man-hours (henceforth m-h). In this study, I first detail some of the specificities of the method and then focus on the implication for Neopalatial architecture, by studying three specific cases. The purpose of this paper is to highlight the insights offered by such a quantitative approach for the built form and the factors at play during its production. I especially focus here on the material and technical choices of the builders, on the setting of costs into their historical context, and on the workforce involved in the building project.

1. Labour costs estimates: standard costs, sampling and volumes

The specificities of Minoan Neopalatial architecture imply first of all the establishment of standard costs adapted to its specific materials and techniques. Such a quantifying method is based on theoretical costs derived from a variety of sources, including tests conducted in experimental archaeology, mostly by anthropologists but also observations of masons and artisans using pre-mechanical era techniques, often coupled with experimentation. Information can also be found in a series of specialized works intended for architects and engineers of the late 19th – early 20th centuries which are based partly on observations, partly on accounts of large building sites. Finally, reports of international institutions supporting agricultural projects in developing countries also provide information especially when it comes to estimating the average times necessary for a person to accomplish a given task for a set volume of material. Earth (used for brick-making

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* I thank Prof. J. Driessen for his advice.

as well as for mortar and coating), field stones (of various types according to whether they were reworked or not), ashlar, wood (used in wall and roof frameworks) and flagstones (used for paving and in some cases for roofs), were then considered according to the various aforementioned architectural tasks. Although we do have standard costs at our disposal for finishing activities (various coatings and painting), the latter were not applied to our sample because of the varying preservation of the archaeological data which does not permit any systematic comparison. Consequently, only building exteriors were considered. Moreover, the reuse of materials in new structures, amongst which those resulting from site levelling, wall demolition, the material properties – such as stone density –, the loss of material during manufacture and the varying proportions of mortar in the walls which all play a role in the application of standard costs have been omitted here.

A convincing application of the method relies on standards costs relating to the specifics of the considered architecture. The buildings investigated need to be sufficiently preserved and studied in order to allow a precise estimation of their volumes. The degree of architectural elaboration has proven in some cases to be insufficient to allow for a detailed and accurate estimate of construction costs. This is actually the reason why the finishing stage was not considered. The state and recording of the data can vary considerably according to the way the structure was abandoned or destroyed, the conditions under which it was subsequently preserved, and the excavation techniques it was finally subject to. On the basis of criteria, an ‘energetic’ investigation of the palace at Gournia and of the buildings at Klimataria-Manares and Achladia is here undertaken. The different floors these buildings originally comprised have been taken into account. Some of the data are sometimes based on conjectural information and/or reconstructions, but a range of hypotheses were considered by the said method in order to offer the best conceivable approach to the former appearance of these buildings. Furthermore, the cost estimate takes into account the probable architectural sequence of the edifices, including their possible modifications or additions. Needless to say, it was impossible to take into account all parameters at play in the building project. This fact acknowledged, we should remind that the decimals kept after commas are no pretention for providing absolute labour costs, but the illustration for a wish at coherent calculations.

**Fig. 1** Plan of the basement, main and upper floor of the palace at Gournia (after Soles 1991, figs. 29, 58 and 67). Written in blue are the parts which were added or remodelled.

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6 The estimates of volumes and precisions concerning details of the application are given in the annex volume of Devolder 2009.
2. Applications

2.1. The palace at Gournia

The construction of the palace of Gournia generated 83,275.68 m-h, spread over distinct architectural phases. Soles suggests that the initial construction phase of the building took place late in the MM III period, while the modifications of the structure very likely happened during the LM IB period. The latter implied the remodelling of the West façade and the Central hall as well as the addition of the South wing, the East wing and rooms 30 and 34 (fig. 1). The ashlar necessary for the construction of the West façade, the South wing and the Central hall was provided by the quarry at Mochlos, which may have been used only from LM IB onwards.

Structural details tend to indicate that at least the remodelling of the Central hall had been completed when the East wing and rooms 30 and 34 were added to the palace. Indeed, the eastern walls of the Central hall support the western walls of the East wing, and these would therefore have been destroyed if they had been anterior to the ashlar remodelling of the hall. Furthermore, the rubble wall in between the alcoves of the Central hall would have been destroyed for the ashlar remodelling, provoking the collapse of levelling materials under the East wing floor into the Central hall. I therefore suggest that the West façade, the Central hall and the South wing, which make privileged use of ashlar, were built or remodelled first, then followed by the East wing, and finally by rooms 30 and 34. As such, the palace at Gournia would seem to represent the most eloquent case of LM IB conspicuous consumption in the architectural sphere. This is exemplified by several other sites in the Isthmus of Ierapetra, but seriously contrasted with the situation illustrated by the domestic architecture in the Gournia town. The costs of the successive construction phases have been estimated as follows:

<table>
<thead>
<tr>
<th>Labour Costs</th>
<th>Initial phase</th>
<th>South wing</th>
<th>West façade</th>
<th>Central hall</th>
<th>East wing</th>
<th>Rooms 30 &amp; 34</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface</td>
<td>1,825.39 m²</td>
<td>222.36 m²</td>
<td>-</td>
<td>376.13 m²</td>
<td>113.42 m²</td>
<td></td>
</tr>
<tr>
<td>Ratio cost/ ground surface</td>
<td>17.59 m-h/m²</td>
<td>82.48 m-h/m²</td>
<td>-</td>
<td>41.2 m-h/m²</td>
<td>12.44 m-h/m²</td>
<td></td>
</tr>
</tbody>
</table>

TABLE 1 Labour costs of the construction and remodelling phases of the palace at Gournia and, where appropriate, the built ground surface of the addition in question.

It is interesting to see that the building of the South wing generated higher costs than the addition of the East wing, despite its surface being less than two thirds the ground surface covered by the latter. Ratios of labour costs per square meter of ground surface covered by the structure indicate a considerable difference between the distinct building phases. The following graph illustrates the relative importance in each phase of specific materials and techniques (graph 1).

Specific architectural tasks and materials generated relatively important labour costs during the two phases: levelling costs, implied by the adaptation of the bedrock to the basement and main floor in the first phase, and the filling and building of retaining walls in the second phase (fig. 2). The very high percentage of costs

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Labour Costs and Neopalatial Architecture

implied by the use of mudbricks for the upper floors walls is also striking, but we will return to the higher than expected cost of this building material in due course. In fact, it is clearly the ashlar which makes up for most of the costs, representing 28.29% of the total labour costs invested in the palace. The high costs of the structure can therefore for a large part be put down to specific choices in terms of adaptation of and to the local topography, with especially high levelling costs, and to the presence of an expensive material such as ashlar. Both seem part of a deliberate attempt at conspicuous consumption.

These material and technical choices become even more striking if one considers that, during LM IB, the site reveals a vernacular architecture characterised by the abandonment and subdivision of many houses. Although this marked difference may eventually be tempered by a more refined and precise architectural chronology of the building, it is tempting to suggest a link between the two phenomena. Is it indeed possible that this excessive investment, in the sense that it exceeded the structural needs of the building, played a

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**GRAPH 1** Percentage of labour costs for each construction phase of the palace at Gournia.

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**FIG. 2** Section of the palace at Gournia, indicating the levelling prior to the erection of the building on the top of the acropolis (after Soles 1991, fig. 57).

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13 Trigger 1990, 119: “Its [sc. monumental architecture] principal defining feature is that its scale and elaboration exceed the requirements of any practical function that a building is intended to perform”.

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specific role in the historical conjuncture of the site? Some have argued that “one would expect an increase in monumental building in times of economic and political stress”\(^\text{14}\). If so, the expensive remodelling of the palace at Gournia may be interpreted in two different, entirely contradictory ways. It could either indicate a flourishing situation at the site during the LM IB period – a conjuncture not unlike the one hypothesized at Mochlos – or it may have served to counterbalance the troubles as suggested by the vernacular architecture elsewhere in town. Also, different architectural phases may illustrate reactions to different contexts, which the chronology of the building and the evolution of the town during the Neopalatial period have not yet allowed to clarify.

<table>
<thead>
<tr>
<th>Phase</th>
<th>Labour costs</th>
<th>Necessary workforce</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial phase</td>
<td>32,110.7 m-h</td>
<td>44.59 individuals</td>
</tr>
<tr>
<td>West façade</td>
<td>9,144.66 m-h</td>
<td>12.70 individuals</td>
</tr>
<tr>
<td>Central hall</td>
<td>6,771.45 m-h</td>
<td>9.40 individuals</td>
</tr>
<tr>
<td>South wing</td>
<td>18,340.45 m-h</td>
<td>25.47 individuals</td>
</tr>
<tr>
<td>East wing</td>
<td>15,496.67 m-h</td>
<td>21.52 individuals</td>
</tr>
<tr>
<td>Rooms 30 &amp; 34</td>
<td>1,411.74 m-h</td>
<td>1.96 individuals</td>
</tr>
</tbody>
</table>

**Table 2** Necessary workforce required by each construction phase of the palace at Gournia, considering 90 eight-hour working days.

Beyond new insights into the architectural traits of the building and the relationship of its own history to local conjuncture, labour costs make it possible to investigate the importance of the human factor in the interpretation of the building project. As such, the Neopalatial population on the site has been estimated at around 5,420 individuals\(^\text{15}\). Considering that between 20 and 33% of a normal population may be considered as a potential workforce\(^\text{16}\), this implies that between 1,084 and 1,804 individuals were available, regardless of the type of mobilisation, to build the palace. If we consider the difficult times the town may have been facing on the eve of its destruction by fire at the end of the Neopalatial period, it may well have meant that this potential workforce was considerably reduced. But even if less manpower was available, it is interesting to consider these numbers in comparison to the workforce necessary for each phase. To estimate the latter, several parameters need to be set. One of these is the length of the working day, which is here estimated as eight hours\(^\text{17}\), though this may have varied according to the tasks accomplished\(^\text{18}\). Another is the potential duration of the entire building project. Several studies have stressed that larger projects were generally carried out in a limited time-frame, in order to reduce the exposure of damage-prone walls. As a consequence, work was usually carried out during the dry season. Similarly, the months during which fields require little or no work were often those used for such building activities. Comparative studies based on examples in Central America, Greek antiquity and Western Africa suggest a period of between two and five months\(^\text{19}\). These

\(^{14}\) Driessen 1995, 71.

\(^{15}\) Based on estimates by Branigan 2001, 15–16 and tables 3.3. and 3.4; Watrous and Blitzer 1999, 906.

\(^{16}\) Abrams 1987, 493: “The labor pool […] might have ranged from 20 percent of the total population – only adult males or household heads – to approximately 33 percent of the total population – adult males plus some portion of adult females and subadult males”.

\(^{17}\) Erasmus 1965, 283.

\(^{18}\) Aaberg and Bonsignore 1975, 46.

\(^{19}\) Abrams 1987, 490: “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, construction is scheduled for the dry agricultural off-season […] 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”. On the basis of interviews with artisans from Copan, Honduras, Abrams (1994, 43) stretches his estimate: “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”. For the Batammaliba (Togo and Benin), Blier (1987, 19) argued: “House construction is generally
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concern societies where architecture is mostly an unspecialised activity and where those forming the labour pool must also attend to their own affairs, agricultural for the most part, as was very likely the case in the Aegean.

Where the later phases are concerned, some of these works (West façade, the Central hall and the South wing) may have happened simultaneously so the necessary workforce may have been combined. In any case, the number of individuals involved in the building project would always have been lower than those available on the site. If an excess in invested energy can be observed in the construction or modification of the palace at Gournia, it is more a matter of materials and technical choices than an excessive demand on the population of the site. It cannot even be excluded that some of the participants of the building project were foreign to Gournia, especially if the town was not large enough to support a permanent class of craftsmen able to accomplish the most skilful tasks, such as required by ashlar manufacture and construction. And although reasonable and plausible in their own demographic context, these seemingly considerable costs appear, however, as excessive if one regards the development of the rest of the town in LM IB.

2.2. The buildings at Klimataria-Manares and Achladia

The buildings at Klimataria-Manares and Achladia, together with sites such as Zou and Aghios Georgios Tourtouloi, are situated in the socio-politically and economically debated landscape of the hinterland of Petras. They have been the object of recent investigations by E. Mantzourani and her collaborators, who provide detailed architectural accounts and reconstructions which help to appreciate the role of these buildings in a regional context.

The Klimataria-Manares edifice is an isolated structure located on and along the Stomion river and has been dated to MM IIIA–LM I. A mole built on its east side suggests the building actively participated in a network providing goods and persons towards Petras, the central point of the region, although it cannot be excluded that Klimataria controlled the passage by river. Storage rooms were identified but it is not possible to say whether commodities were brought in from the area or whether they were produced at Klimataria-Manares.

The construction of the building at Klimataria-Manares generated labour costs of 10,981.37 m-h. Levelling activities only account for a mod-

Fig. 3 Plan of the building at Klimataria-Manares (after Mantzourani and Vavouranakis 2005, fig. 13).

undertaken each year between the dry season months of December and February". In Greek antiquity, "[…] 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"; see Burford 1963, 33.

20 Halstead and Jones 1989; Osborne 1996, 51.
23 Mantzourani et al. 2005, 761 and 763; Platon 1952, 636.
24 Platon mentions the discovery of several pithoi, some of which had a typical MM III rope decoration, see Platon 1952, 637.
erate part of the total costs\(^25\) (2.29\%, graph 2 and fig. 4). These limited levelling works were compensated by the use of large amounts of unworked large rubble and blocks for masonry (82.89\%, graph 2), probably because the setting of the edifice over four main terraces required sturdy walls. Indeed, many of these walls are one meter or more in width. Pseudo-ashlar walls, worked blocks of which implied labour costs for collection and manufacture far below those represented by ashlar, account for only 4.41\% of the total construction costs of the building (graph 2). This rather modest elaboration was placed in a visually prominent position in the building, at the lower entrance which could be reached via the north-eastern, lateral staircase (B’, fig. 3). Although the building’s labour costs indicate a strong investment in structural efficiency, the masons nevertheless invested some time in a somewhat status-loaded material, though moderate both in elaboration (the blocks were only roughly worked) and quantity.

The ‘villa’ at Achladia, in contrast to the building at Klimataria-Manares, may have been part of a settlement, as is suggested by the walls which appear in the agricultural fields around the building\(^26\). The structure examined here is Building A, located on a low hill-top but with a commanding view of the region\(^27\). It was built in MM IIIB or LM IA\(^28\) and it cannot be excluded that its function changed between LM IA and B, since it is possible that the original reception rooms M and B were transformed into dining or storage areas\(^29\). Indeed, the number of storage and cooking vases

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\(^{25}\) Mantzourani et al. 2005, 749 and 754.
\(^{27}\) Mantzourani and Vavouranakis 2005, 101.
\(^{28}\) See N. Platon (1959, 212) for a MM IIIB dating of the initial construction of the building, while L. Platon (1997, 194) suggests LM IA, on the basis of the architectural particularities of the building. Although the pottery corroborates a LM IB destruction of the building, as suggested by L. Platon, the date of the construction remains uncertain.
\(^{29}\) Mantzourani and Vavouranakis 2005, 113.
discovered during the excavation of the structure suggest a mainly domestic and agricultural function. Thanks to a prior levelling of the site, the building could be given a modular plan and the orientation of the entrance towards the south-east protected it from fierce north and north-west winds. These features, as well as the presence of an architectural elaboration, with multiple doors and columns, stress the quality of this countryside ‘villa’\textsuperscript{30} (fig. 5).

Since Mantzourani and Vavouranakis suggest different hypotheses as to the reconstruction related to the possibility that the upper walls were made of bricks or rubble\textsuperscript{31}, I here offer several hypotheses concerning the costs of the ‘villa’ at Achladia. In total, six estimates are suggested in table 3. Costs vary between 9,630.52 and 11,521.15 m-h. Though this material is generally the object of some disrespect, bricks walls surprisingly generated significantly higher costs than rubble walls. These costs seem to result from the fact that the mixing of the raw materials gathered for the bricks and their final shaping demanded more input and such tasks were unnecessary for the making of rubble walls. As expected, the layout of the ‘villa’ required important levelling works representing between 22.43 and 26.83% of the total labour cost of the structure, according to the various reconstruction hypotheses proposed by Mantzourani and Vavouranakis. A voluminous backfill and the construction of walls in sturdy masonry supporting it in the north-east corner of the building account for most of the construction costs (graphs 3 and 4).

The costs of the buildings at Klimataria and Achladia are therefore the result of specific choices that are mostly concerned with the adaptation of the building to the local topography, in one case by time-consuming levelling. At Achladia, though the levelling had a strong impact on the total construction costs, it allowed for a free modular planning of the structure\textsuperscript{32}, absent at Klimataria-Manares where the structure was rather adapted to the topography by distribution of the rooms on distinct terraces supported by sturdy masonry. This corroborates the observation made by V. Fotou when she distinguished between structures whereby the plan was adapted to the specificities of the ground and those which saw the terrain adapted to a preconceived, elaborate plan. This distinction would then indicate whether the building belonged to a different architectural category\textsuperscript{33}. It is true that, beyond planning, the building at Achladia does indicate some deliberate attempts at producing quality architecture, in which the absence of the most proliferated polite architectural features may be linked to the relative isolation of the ‘villa’ from the main Neopalatial centres. If we take the geographical extent of the so-called palatial features on the island\textsuperscript{34} into consideration, isolation may perhaps not have been the main reason why this building remained relatively modest, and it is interesting to stress that its total costs remain in the same range as those of the building at Klimataria-Manares.

An investigation of the human factors at play within the production of these buildings is not an easy task because in one case the structure is isolated and in the other case data are lacking on the size and available population of the Neopalatial settlement. We therefore need to consider this question from a different perspective

\textsuperscript{30} Mantzourani and Vavouranakis 2005, 101–3; Fotou 1990, 65 and fig. 29; Platon 1959, fig. 1.

\textsuperscript{31} Mantzourani and Vavouranakis 2005, figs. 13, 14 and 16.

\textsuperscript{32} Preziosi 1983, 332–35.

\textsuperscript{33} Fotou 1990, 72–73.

\textsuperscript{34} Driessen 1989–90.
<table>
<thead>
<tr>
<th>Achladia</th>
<th>Hypothesis 1</th>
<th>Hypothesis 2</th>
<th>Hypothesis 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levelling</td>
<td>2,584.22 m-h</td>
<td>2,584.22 m-h</td>
<td>2,584.22 m-h</td>
</tr>
<tr>
<td>Ground floor rubble walls</td>
<td>923.62 m-h</td>
<td>923.62 m-h</td>
<td>923.62 m-h</td>
</tr>
<tr>
<td>Megalithic walls</td>
<td>2,202.08 m-h</td>
<td>2,202.08 m-h</td>
<td>2,202.08 m-h</td>
</tr>
<tr>
<td>Limestone blocks walls</td>
<td>641.37 m-h</td>
<td>641.37 m-h</td>
<td>641.37 m-h</td>
</tr>
<tr>
<td>Ceiling</td>
<td>715.55 m-h</td>
<td>715.55 m-h</td>
<td>715.55 m-h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Upper floor rubble walls</th>
<th>Upper floor brick walls</th>
<th>Upper floor rubble walls</th>
<th>Upper floor brick walls</th>
<th>Upper floor rubble walls</th>
<th>Upper floor brick walls</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,542.81 m-h</td>
<td>3,738.76 m-h</td>
<td>2,032.38 m-h</td>
<td>2,988.17 m-h</td>
<td>2,358.11 m-h</td>
<td>3,467.1 m-h</td>
</tr>
</tbody>
</table>

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<tr>
<th>Roof</th>
<th>Roof</th>
<th>Roof</th>
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<tbody>
<tr>
<td>715.55 m-h</td>
<td>531.3 m-h</td>
<td>621.83 m-h</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Total</th>
<th>Total (1b)</th>
<th>Total (2a)</th>
<th>Total</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,325.2 m-h</td>
<td>11,521.15 m-h</td>
<td>9,630.52 m-h</td>
<td>10,586.31 m-h</td>
<td>10,046.78 m-h</td>
<td>11,155.77 m-h</td>
</tr>
</tbody>
</table>

Table 3  Estimate of the labour costs of the ‘villa’ at Achladia according to the different reconstruction hypotheses (after Mantzourani and Vavouranakis 2005, figs. 13, 14 and 16). In blue, the costs considered in graphs 3 and 4.

Graphs 3 and 4  Proportion of the materials and techniques involved in the construction of the ‘villa’ at Achladia, hypotheses 2a (to the left) and 1b (to the right), as described in table 3.
than that in the study of the workforce involved in the construction of the palace at Gournia. On the basis of the parameters mentioned before – i.e. a building program of 90 eight-hour working days – we can estimate the workforce necessary for raising the buildings at Klimataria-Manares and Achladia (table 4). This would be 15.25 individuals for the former and between 13.37 and 16 individuals for the latter, again following the different reconstruction hypotheses considered. These numbers allow us to consider whether the structures were built by their own inhabitants or whether the workforce necessarily implied an input from a larger area, which could indicate that these buildings functioned in a wider regional network. If we follow Abrams in assuming that between 20 and 33% of the population was likely to participate in the construction, this implies a contributing population of between 45.75 and 76.25 individuals in the case of Klimataria-Manares, and a population of between 40.11 and 80 individuals in the case of the ‘villa’ at Achladia.

By correlating roofed space and population in 18 case studies, Naroll has suggested an estimate of 10 m² of living (roofed) space per individual. Whitelaw has pinpointed some of the methodological weaknesses of Naroll’s reconstruction, stressing notably that “there is no simple relationship between people and the space they inhabit”. The size of the house may indeed better mirror the wealth of the inhabitants than their actual number. Even if we assume that the buildings at Achladia and Klimataria-Manares fulfilled other than purely domestic functions, we have no other indication about the size of the contributing group which inhabited the building than Naroll’s estimates. Interestingly, the area occupied by living space in the Klimataria-Manares building is 242.61 m² whereas that in the Achladia ‘villa’ is 309.02 m² (hyp. 1) or 269.27 m² (hyp. 2). This means that in no case could the inhabitants have provided the necessary workforce, whether this was made out of 20 or 33% of the population (table 5).

The lack (or discrete character) of elaborate architectural elements in these structures would seem to exclude the possibility that they were built by itinerant craftsmen. It therefore seems more likely that the inhabitants of the settlement (in the case of Achladia), from the region (in both cases) or from some particular social network provided the necessary workforce. It is, for the moment, difficult to go further into an analysis of the details of the workforce mobilisation, and although specific payments for the masons cannot be excluded, it is important to remember the role these edifices played in a wider economical and socio-political network and landscape. Both buildings seem indeed to have participated actively in the production of agri-

<table>
<thead>
<tr>
<th>Expected workforce for a 90-day building program (individuals)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Klimataria-Manares</td>
</tr>
<tr>
<td>15.25</td>
</tr>
<tr>
<td>Achladia (hyp. 2a – min.)</td>
</tr>
<tr>
<td>13.37</td>
</tr>
<tr>
<td>Achladia (hyp. 1b – max.)</td>
</tr>
<tr>
<td>16</td>
</tr>
</tbody>
</table>

TABLE 4 Estimates of the expected workforce for a 90 eight-hour working day building program for the buildings at Klimataria-Manares and Achladia (two hypotheses).

<table>
<thead>
<tr>
<th>Population corresponding to the expected workforce (individuals)</th>
<th>Considering workforce as 20% of population</th>
<th>Considering workforce as 33% of population</th>
<th>Estimated number of inhabitants based on Naroll’s estimates (individuals)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Klimataria-Manares</td>
<td>76.25</td>
<td>45.75</td>
<td>24.26</td>
</tr>
<tr>
<td>Achladia (hyp. 2a – min.)</td>
<td>66.85</td>
<td>40.11</td>
<td>26.90</td>
</tr>
<tr>
<td>Achladia (hyp. 1b – max.)</td>
<td>80</td>
<td>48</td>
<td>30.90</td>
</tr>
</tbody>
</table>

TABLE 5 Estimates of the number of individuals corresponding to the expected workforce, compared to the potential inhabitants of the buildings at Klimataria-Manares and Achladia.

35 Naroll 1962.
36 Whitelaw 2001, 16. See also Cameron 1999, 201 on the many factors likely to have an impact on room size.
38 Abrams 1987, 493.
cultural commodities and their circulation in the hinterland of Petras. Whether the individuals in charge of the respective sites had a privileged access to the material and human resources of some network which allowed them to support important building programs, or whether the community was forced to collaborate in the making of its architectural environment, because it took rewards from it, are questions which are for the moment hard to settle. The study of labour costs generated by these building projects does in any case lend some support to the argument for an external origin of the workforce, as suggested for the palace at Gournia.

The application of the ‘energetic’ approach to these three cases has illustrated the possibility of elucidating specific behaviour involved in building projects. The objective appreciation of the labour costs generated by their construction – especially in the case of the palace at Gournia – has shown the energetic impact of excessive material and technical choices (such as ashlar and levelling), at the same time demonstrating that these were feasible in terms of available workforce. The method allows statements to be made on the involvement of users and local population in the construction, linking building programs with demographic evolution and evaluating their impact on the settlement or region. In this way, it contributes to a better understanding of building programs in the context of local and regional social networks and historical developments.
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After a doctoral thesis focusing on the spatial syntax of Neopalatial architecture, Quentin Letesson became a BAEF fellow/research associate at Bryn Mawr College, and a postdoctoral fellow at the Aegean Material Culture Laboratory of the University of Toronto. He is now chargé de recherches FRS-F.N.R.S. at the Université Catholique de Louvain and a member of the AEGIS research group where his research mostly focuses on a diachronic study of Minoan architectural configuration. He is also involved in the excavation and publication of different Minoan sites: Sissi, Palaikastro, and Myrtos-Pyrgos.

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The content

What is the social role of images and architecture in a pre-modern society? How were they used to create adequate environments for specific profane and ritual activities? In which ways did they interact with each other? These and other crucial issues on the social significance of imagery and built structures in Neopalatial Crete were the subject of a workshop which took place on November 16th, 2009 at the University of Heidelberg. The papers presented in the workshop are collected in the present volume. They provide different approaches to this complex topic and are aimed at a better understanding of the formation, role, and perception of images and architecture in a very dynamic social landscape. The Cretan Neopalatial period saw a rapid increase in the number of palaces and ‘villas’, characterized by elaborate designs and idiosyncratic architectural patterns which were themselves in turn generated by a pressing desire for a distinctive social and performative environment. At the same time, a new form of imagery made its appearance in a broad spectrum of objects and spaces which were ‘decorated’ with meaningful motifs chosen from a restricted and repetitive pictorial repertoire. This standardized repertoire indicates the configuration of a coherent pictorial program which was implemented in several social situations. The present volume is intended not only for specialists in Minoan culture but also for readers who are interested in the social dimension of images and architectural remains and especially in issues relating to their materiality, use and perception.

The authors

Diamantis Panagiotopoulos is Professor at the Institute of Classical Archaeology, University of Heidelberg. His research interests include the social structures of the Aegean civilizations, Aegean imagery, the interconnections between the Aegean and the Near East in the second millennium B.C., and ancient sealing practices. He is currently director of the interdisciplinary research program on Minoan Koumasa, Crete. Ute Günkel-Maschek completed her doctoral thesis at the University of Heidelberg as a member of the graduate academy “Spaces, Images, Ways of Life in Ancient Civilizations”. Her research interests lie in the study of Minoan and Mycenaean imagery and visual culture as expressions and factors of social and cultural realities, and in the 3D visualization of the perception and consumption contexts of images.

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.