

# Daidalos at Work



A Phenomenological Approach to the Study of Minoan Architecture



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*Front cover: photo by Marinos Papadantonakis of the loggia above the Throne Room in the Palace of Minos at Knossos in 2012.*

*Frontispiece: aerial photo of the Palace of Phaistos by Gordon Gahan, National Geographic Creative.*

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You yourself are the entrance. The doors open  
effortlessly to the eye and let you in.  
Others have been here before you, and left shadows behind  
that fit you: head, hand, body  
and hesitating foot. Only the voice urges onward,  
from echo to echo and is already in the center  
with its fleeting arguments. The body  
stands dolefully at the beginning: too many tracks  
trace away from it through the sand,  
and none is decipherable.  
*Close your eyes and go!*

Excerpt from "In the Labyrinth"  
Michael Krüger (1982)



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## List of Abbreviations

cm	centimeter(s)	km	kilometer(s)
diam.	diameter	LM	Late Minoan
EM	Early Minoan	m	meter(s)
EN	Early Neolithic	mm	millimeter(s)
esp.	especially	MM	Middle Minoan
FN	Final Neolithic	pers.	personal
ht.	height	comm.	communication
ha	hectare(s)	SPAB	Society for the Protection of Ancient Buildings
INSTAP	Institute for Aegean		
SCEC	Prehistory Study Cen- ter for East Crete	w.	width



## Preface and Acknowledgments

*When the exit no longer concerns you, you have reached the goal. (Krüger 1982)*

Architects of all times could not have found a better archetypal figure than the mythical Daidalos working in Crete for the legendary Minos. All that is related to the works of Daidalos and Minos, and all that has been exposed through archaeological excavations of Bronze Age sites on Crete, draw up the picture of a fascinating, brave new world (Figs. 1, 2). This was a world of affluence and innovation, a unique moment in the early history of architecture, created literally out of the blue sea of the Aegean. In a bizarre way, that moment seems to echo another brave new era much closer to our times, so much so that one is tempted to see the shadows of Le Corbusier and Frank Lloyd Wright in the mythical body of Daidalos.

Daidalos makes his first appearance as “an architect at work”<sup>1</sup> in Homer (*Il.*18.590–594), drawing on the ground a circle, the most perfect of all geometrical shapes—for some, the archetypal form of the house. With this circle he cuts and bounds a piece of land, transforming it into a locus, a place wherein Ariadne can perform her dance.<sup>2</sup> By the movement of her body, Ariadne bestowed on architecture the third dimension of space: the vertical. Through the making of the archetypal circle—a manifestation of the act of separation—Daidalos instigated the τέχνη (*techne*; craft/art) of architecture, only to lift it to the utmost heights of ingenuity and sophistication by creating another archetypal



Fig. 1. Theseus fighting the Minotaur, as depicted on an Attic black-figure vase. After Michailidou 1981, fig. 5.

form, the labyrinth, for some the symbol of life itself and for others of the horrors of the way, the step into the forbidden, where the walls serve only to delineate the motion that carries the true meaning (Miller 1982). The labyrinth, as a paradigm of order, stands for the primordial idea of architecture and a metaphor of human existence (Pérez-Gómez 1985, 51).

Daidalos's tasks, the myth informs us, were multifold: time and again he was challenged to solve the most intricate and absurd problems set by authorities, social demands, religious beliefs, or personal drives. His ultimate task, in other words, was to shape the physical world so as to suit a way of life set by a specific society; in this, the ethical function of architecture is acknowledged. It took indeed two legendary figures for the miracle to happen in Crete in the second millennium B.C.: a king

Minos, representing the commissioner, the client, or the patron, and an ingenious Daidalos, representing the architect, for Daidalos did not act on his own behalf, and he did not create magnificent edifices for their own accord. He was following orders and satisfying desires, some explicit, others implicit, and some even lustful. The history of architecture could indeed be written as the history of the relationships between patrons and architects.

Of the materials (*υλικά*; *ylika*) that nature provides, wood (*ύλη*; *yle*) was the first to attract Daidalos's interest. More than the materials, however, it was his way of working—cutting and joining—that defined his metier (Karvouni 1999, 106). He was a *te-ko-to-ne* (τέκτων [*tekton*], mason), a *to-ko-do-mo*, and a *na-u-do-mo* (shipbuilder), and, if there were such a word, he would have been known as an aircraft builder as well. The name Daidalos means “cunning worker” or “skillful one;” he is architect, civil engineer, surveyor, and mechanical engineer all in one, and, of course, he is above all the inventor who combines physical observation and mental inquiry with craftsmanship. He is also a fugitive and a traveler, and therefore a carrier of ideas and technical knowledge ready to be engrafted at his next destination, be it Athens, Egypt, Crete, Sicily, or Ugarit, under different personifications such as Hephaistos, Kothar, or Ilish (Morris 1992, 73–100).<sup>3</sup>

The myth, as a store of experiences and mental themes, will always interfere with our perception of the past: it lurks in the shadows of the ruins of the Palace of Minos at Knossos and in the nebulous images of its missing parts. It also lingers in the perpetual quest for the true Ithaca or the intangible Atlantis. For myths look ahead, into the future, and not into the past that generated them, constantly seeking responses and new interpretations (Pallasmaa 2005a, 132, 187). From myth to reality the distance is one that cannot be bridged, for they do not represent opposite sides of the same land; they belong to different worlds that mirror each other through the broken looking glass that separates the world of ideas from the factitious world of sticks and stones. They both partake,



Fig. 2. Map of the island of Crete showing major Minoan sites. Map C. Palyvou.

however, in our efforts to understand the realities of the past as much as in our endeavors to unravel the myths of the art of architecture.

This rather free reference to the myth of Daidalos was meant as an introduction to both the goals and the context of what follows. This is primarily a book on architecture, and as such it seeks to bring forward the deeper forces that guide the work of all the sons and all the daughters of Daidalos. Architecture is the protagonist, whereas the prehistoric time of this architecture is as important as any other historical time. This book is firmly based on the realities of a long-silenced world available to us today through the agency of archaeology. In that sense, it addresses archaeologists, architectural historians, and architects alike, in the hope that it will prove useful to those interested in understanding the Minoan world through its architecture as much as those interested in exploring architecture through the Minoan paradigm. This dual goal emanates from my deep belief in the timeless and universal values of architecture. As a teacher of (history of) architecture, the challenge has been to bring history into the studios where future architectural ethos and practices, and to show that an analytical and critical approach to the past is a potent tool for advancing architectural awareness and educating future architects. I am equally confident that such an approach will return its benefits back to history, for it will provide new tools of thought and methods of interpretation of the relics of the past.

Having set the scope of this book, it is only fair to add what is not included in its goals: the reader will not find a descriptive account of Minoan buildings and sites nor a list of the major architectural achievements in chronological order. This is due not only to the enormous amount of relevant information that has been accumulated to date, but also to an altogether different interest in the subject, as described above. Time, however, is crucial: “We have a mental need to grasp that we are rooted in the continuity of time, and in the man-made world it is the task of architecture to facilitate this experience” (Pallasmaa 2005b, 32). Time-related issues, therefore, such as permanence and change or tradition and innovation, will concern us.

The structure of the book follows, more or less, the long-valued Vitruvian triad of *firmitas*, *utilitas*, and *venustas*, interpreted in the 17th century by Sir Henry Wotton as firmness, *commodité*, and delight and in the 20th century by the Modern Movement of architecture as structure, function, and form (Kostof 1985, 13).<sup>4</sup> It aims at nothing less than the totality of architecture, from its “intentions” to its “ethical function[s],” to borrow from the titles of two seminal books by Christian Norberg-Schulz (1997) and Karsten Harries (2000), respectively, which guided my path and sharpened my vision, if not my pen; a vision that comes from the “eyes of the skin,” to add the work of Juhani Pallasmaa (2005b), whose sensibility helped soften the edges of reason and scientific positivism.

The methodology draws on the field of phenomenology, discussed in Chapter 1, while Gestalt theory lingers in the background, albeit tempered by Pallasmaa’s warning that architectural elements are not mere visual units but encounters that interact with memory (Pallasmaa 2005b, 63). Each topic is explored in two subsequent stages: having raised a question, it is first discussed within a broader theoretical context and then follows an analysis of the Minoan paradigm. Questions addressed are of the type: What is the meaning of entrance as an act of crossing a boundary and how is this expressed in the Minoan world? Why did the Minoans—and only them—come up with the idea of the pier-and-door partition as a mutable barrier? Why are there so many staircases in a compound? What is a light-well as opposed to a court? Totalizing and homogenizing assumptions of Minoan architecture are generally avoided, taking into consideration the problems that arise when dealing with such broad and diverse material. Yet the aura of a distinct style seems to emerge throughout, a style that through a strange whim of history seems to have foreshadowed the works of the early years of the 20th century A.D. This is the main topic of the Chapter 11.

The material used in this book derives primarily from the available publications, but also from my personal, long acquaintance with the prehistoric monuments and sites of Crete (Fig. 2). It corresponds to approximately 200 buildings ranging from huts to palaces and spans the Neolithic to the Neopalatial eras, a time period that covers more than 1,500 years. The emphasis, however, is on the so-called golden era of the Late Bronze Age, approximately 200 years of affluence and creativity for which we are best informed.

A book is written in silence and solitude, yet under the constant immaterial presence of all those who toil in the field. To the people who have undertaken the difficult goal of unwinding the clew of the Minoan world, I am deeply indebted: colleagues of all disciplines, archaeologists, architects, conservators, and many more, with whom I have often joined forces in the archaeological cause, be it in the dig, the laboratory, or the library. My gratitude extends equally to colleagues and scholars who strive to reveal the deeper essence of architecture, a precious legacy for generations to come to which this book will hopefully add a small

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Last but not least, I am thankful to my students in the School of Architecture at the Aristotle University of Thessaloniki for the hard time they give me in trying to persuade them of the usefulness of history; an effort that pays back when each year I see a new group of students leaving the classroom with a fresh mind toward the works of the past and a stronger belief in its value for the future. It also pays back when I think of the subtle, unconscious ways history will find its way in their own work in the years to come, even if they will probably remain unaware of this, since “the history that is most useful for the architect is the history he has forgotten” (Moholy-Nagy et al. 1967, 196).

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## Endnotes

- 1 This quotation is in reference to John Coulton’s book *Ancient Greek Architects at Work: Problems of Structure and Design* (Coulton 1977). *Daidalos at Work* is, in a sense, a prelude to ancient Greek architects at work. For a meticulous discussion on the many attributes of Daidalos, his relation to royal power, and the ambivalent meaning of *techné* as art and architecture, see Frontisi-Ducroux 1975.

- 2 Warren excavated three circular platforms at Knossos and identified them as ritual dancing floors (Warren 1984a, with references to circular ritual dances in art).
- 3 In a well-known Ugaritic epic, the gods Ba'al and 'Anat ask for Kothar-wa-Hasis to be brought from Kptr (generally identified with Crete) to erect a splendid house/palace. Whatever the identity of Kothar and his relations to Daidalos or Hephaistos, the allusion to a highly appreciated Cretan craftsmanship is straightforward. Interestingly, Kothar is also related to Ilish, the carpenter god. That the "house of Baal" would require the services of a builder who is also an excellent carpenter is of special significance in light of the importance of timber in the building technology of Ugarit and the Aegean Bronze Age civilizations (Palyvou 2007).
- 4 As Lefas points out, Vitruvius does not simply say that buildings must be firm, useful, and beautiful. He addresses durability, convenience, and beauty as the three poles of reference for every technical activity, paralleled with the fundamental principles of *ordinatione*, *dispositione*, *eurythmia*, *symmetria*, *decere*, *eurythmy*, and *distributione* (Lefas 1997, 57 n. 1.108).