Giulio Magli

Misteri e scoperte dell'archeoastronomia

Il potere delle stelle dalla preistoria all'isola di Pasqua

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Reviewed by Manuela Incerti

Università di Ferrara, Dipartimento di Architettura
Via Quartieri,8
44100 Ferrara ITALY
manuela.incerti@unife.it

Questo libro parla di come l'uomo ha vissuto il suo rapporto con il cielo e con le stelle (This book addresses how man has lived his relationship with heaven and the stars) (p.13). With these words the author opens his long and detailed account of the great number of material witnesses that attest to the deep, never-abandoned, millennia-long relationship between man and the Cosmos.

The aim of the book is to gather the results of the most revealing and reliable archaeoastronomical research, highlighting from time to time the most original and innovative contributions of that new discipline to the history of mankind in general, and to the history of science in particular.

The 445 of the book describe and illustrate numerous sites distributed over the globe; it is not possible to list all of the book's themes and cases studies, but these include the megalithic civilizations of Northern Europe, Malta, Egypt, Mesopotamia, India, China, Japan, North America, Mexico, Peru and the Easter Islands.

The text begins with a necessarily concise description of the Palaeolithic period, discussing the studies of Michael Rappenglueck on the cave drawings of Lascaux. With the aid of a computer, Rappenglueck reconstructed the position of the stars over the cave at the time that the caves were believed to have been painted (some 15,000 years ago), and in 1998 he proposed an interesting cosmographic interpretation of the scene that gives validity to the existence of some kind of "astronomic thought" in this long-ago age.

Although it is not possible in any case to be certain about these or other material evidence belonging to the Palaeolithic age, a great many studies give credence to the existence of some astronomical intents in building activity beginning as early as the fifth century B.C.

The most important megalithic sites in Europe as well as the scientific relevance of the discovery of radiocarbon dating in identifying the founding dates and successive developments are described with care and thoroughness.

The sites are classified according to classic typologies:

- Isolated stones, *Menhirs*;
- Arches composed of three stones, *Dolmen*;

- Corridors realized with stone slabs and covered with earth mounds, *Barrows*;
- Stone circles, *Cromlech*;
- Circles or ovals of stones surrounded by a moat and earthworks, *Henge*.

The first of all sites examined is Karnak (5000-3000 B.C.). The linear geometries and the extraordinary perspective effects are discussed, as are other material witnesses present in the area (cromlech, dolmen, corridors, great menhir) that confirm the fervent building activity aimed at constructing what the author defines as a “sacred landscape:”

By sacred landscape we mean an environment in which man lives, made by man himself, observed, built, chosen, created, thought out in accordance with an idea, a mental, religious, scientific or philosophic scheme. However, the specific ways and forms in which this intent is expressed can be completely different from culture to culture...

In the second chapter the author describes the sites of Newgrange, Stonehenge, Avebury and Silbury. Studies undertaken on these places begin with the extraordinary intuitions of Norman Lockyer around the end of the 1800s.

In the course of the second chapter the author examines more “dated” conclusions that have been revised over time, such as those of C. Newham and G. Hawkins, up to the theoretical resolution of the discipline thanks to Alexander Thom, extensively described and commented both in its positive aspects as well as in those that are “weaker” or open to criticism.

The third chapter addresses the well-known theme of the remains or traces of more than forty megalithic temples in Malta. The construction of these buildings, datable to 3,500 B.C., appears to have taken into account a south-eastern orientation; according to Klaus Albrecht (2001). This direction is related to the rising of the sun at the winter solstice. Here as in various other occasions (such as the discussion of the temples of the Easter Islands), the author addresses the practical problem of the transportation and positioning of the huge stones of which the monuments are built, referring from time to time to studies in the history of technology and constructive techniques (the second appendix is dedicated to this).

Particularly fascinating, and perhaps less well known, are the studies on the Monumental Mausoleum of Qin in China. This is a funerary site whose square tomb measures 500 meters to a side, probably the largest ever built. In 1974 three huge trenches were found to the east of the tomb. The largest, 210 meters long and 60 wide, comprises nine parallel corridors about three meters wide each, where 8,000 life-size terracotta statues stand. This is the famous “terracotta army” of the Emperor Qin, who died in 210 B.C. The whole complex, including the rows of warriors, is rigorously oriented towards the cardinal points, and appears to follow a principle inspired by, to paraphrase Magli, a sort of cosmic order between Earth, the plane of man and the heavens, in which Qin placed himself in the centre as a kind of guarantor.

The long list of studies, cited in chronological order and in accordance with their historic evolution, might be somewhat tiring to the neophyte, but testify to the author’s commitment to a thoughtful compilation of an extended anthology of studies, a synthesis that was lacking in the panorama of Italian scientific studies.

In the first appendix, “Il cielo ad occhio nudo” (The heavens seen by the naked eye), the reader with less experience in position astronomy will find all the indispensable elements for understanding the phenomena described.

The author-date system of references, normally used in scientific and mathematical work to lighten the load of endnotes or footnotes, will not be familiar to those working in historical, artistic or literary fields.

The tone of the text, sometimes colloquial, transmits the author's participation in the themes that he deals with and his efforts to involve the reader both critically and emotionally.

The book includes indexes of names and sites. The bibliography, rich and up-to-date, is essential for further study.

About the reviewer

Manuela Incerti is Professor of architectural drawing and representation at the Architecture Department of the University of Ferrara, Italy. She got her Ph.D. at the University of Florence, discussing a dissertation that addressed the relationships between astronomy and architecture in the Middle Ages. The research that she actually carries on focus on the theoretical and practical aspects of measuring and surveying monuments, and on the interpretation of the collected data. A member of the Ferrara University team that has been inquiring into 3D scanner survey procedures for some years, she pursues her own personal research on the "design of light" in historical architecture. She is the author of more than forty papers, and of a monograph entitled *Il disegno della luce nell'architettura cistercense. Allineamenti astronomici nelle abbazie di Chiaravalle della Colomba, Fontevivo S. Martino dei Bocci in Valserena*. (Design of Light in Cistercian architecture: Astronomical Orientation of the Abbeys of Chiaravalle della Colomba and Fontevivo S. Martino dei Bocci in Valserena). She teaches courses in measured surveys and drawing, both free-hand and computer-aided, and also drawing for industrial design and fashion.