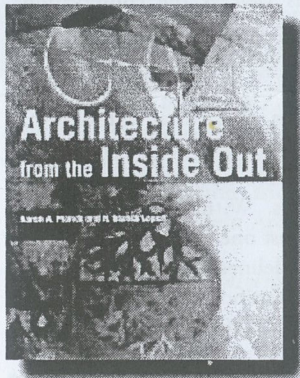


Book Reviews

Peter R. Smith, Book Review Editor



Architecture and the Human Condition

4605

Architecture from the Inside Out: From the Body, the Senses, the Site and the Community, 2nd Edition, by Karen A. Franck and R. Bianca Lepori, Wiley-Academy Press, Southern Gate, Chichester PO19 8SQ, England, 2007. 200 pp., illus., index. Price \$US50 Pbk.

The second edition of a well-received book authored by Karen Franck, an environment-behavior researcher and professor, and Bianca Lepori, a practicing architect, brings a corporal understanding to a discussion of place, and does so with a great degree of success.

The book is organized into six chapters, as was the first edition, but this edition features a new preface and postscript. Additionally, the text is augmented with new case studies and design examples and references. Chapter One (by Franck), "Inside, Outside, and Inside Out," provides the book's groundwork by exploring the meaning of the major themes that feature prominently in future discussions. Chapter Two (by Franck), "From the Body", introduces the

body, the body in motion, and bodily sensations as starting points for the process of production of space. Chapter Three (by Lepori), "The Animism of Architecture", explores the experiential dimensions of materiality, and in fact treats materiality in terms of the human condition. Chapter Four (by Lepori), "Space Therapy", discusses a number of topics, including the relationships and interactions of designers and users, the generative mechanisms in architecture, and issues associated with architectural narration. Chapter Five (by Lepori & Franck), "Product and Process," starts with a critique on the process of conception in design, with "conception" serving as a highly charged term for the authors. Lepori and Franck go on to discuss the human condition and the social milieu as "inner" forces and thus a starting point of design. Chapter Six (by Franck), "Balancing Opposites", sketches a new intellectual approach that fuses together the objective and the subjective, the experiential and the rational, and the explicit and the implicit. This "more sensuous, embodied approach to design starts from the body, and relishes the role of architecture in meeting people's needs and enhancing daily life" (p. 161).

I originally construed this review in terms of the human and social aspects of architecture, and in doing so I considered a number of core themes that have been pursued within environment and behavior studies. However, the book differs substantially from the paradigmatic tradition within that research domain. Franck and Lepori challenge Cartesian thinking both in design and in environment and behavior studies. The authors initiate and develop their discourse employing

post-positivist and post-structuralist perspectives. Their paradigmatic stance might sound unorthodox to environment and behavior researchers; architectural critics and humanistically minded designers will be more at ease with this way of thinking, but they will have to accept a shifting center of interest from materiality and abstract aesthetics towards the human condition and a broader social context. The authors obviously aim to emancipate human experience and subjective knowledge, and to that end, they provide a primer of discourse, attitude, and state of mind that will help readers to engage in the production of experiential knowledge. Their method borrows from the interpretative realms of philosophy of art and art criticism, and it brings that insightful thinking into the world of environment and behavior. Thus, their approach amalgamates the three major aspects of architecture into one holistic entity. By bringing holism into the discourse, the authors restore the human condition as an inner self – a starting point – and as a *raison d'être* of architecture.

The book promulgates a way of thinking that is not widespread in either the architectural design or the environment-behavior communities. It provides an example of how familiar topics can be treated and perceived from a different perspective, as well as how the focus of the process of 'artification' can shift with the shifting zeitgeist of postmodernity. The text will be of great interest to architectural and environment and behavior scholars, as well as to architects and students in these fields.

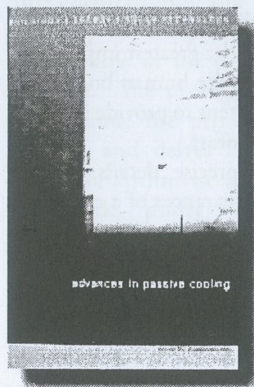
Lubomir Popov, Bowling Green State University, USA

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rebuilding of the interior of the Opera Theatre, reflecting, perhaps, that a book of such an ambitious scope has been in preparation for a considerable time.

Throughout, *Preservation of Modern Architecture* is illustrated extensively with excellent black and white photographs, many of them historic in nature, and excellent plans of each of the case buildings. No scholar will fault its meticulous and lengthy referencing which seems to have absorbed the bibliographical sources. This book is essential not only for all organizations, practices and educational institutions involved in the practice and education of conservation but also is an extremely useful adjunct to every school of architecture in the world. Theodore Prudon's encyclopaedic work deserves the very widest of readership for those wishing to understand and value the development of Modern Architecture in the world.

Trevor Howells, University of Sydney,
Australia



Passive Cooling

4608

Advances in Passive Cooling, by Mat Santamouris (Editor), Earthscan, 8-12 Camden High Street, London NW1 0JH, UK, 2007. 303pp, illus., index. Price £80.00.

Passive cooling is seen an important theme in 'green' architecture. The need to develop alternative methods of cooling buildings other than by the use of air conditioning is now paramount in a post-climate-change world. The book is critical of present design thinking but gives alternatives to providing cooling and comfort using passive systems.

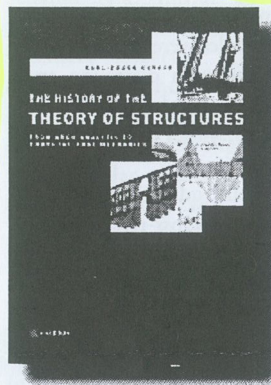
The structure gives clear indication of why passive cooling is needed not only

to mitigate further effects on climate change but also how to respond to its effects. There is an important overview of the adaptable model of thermal comfort, which is central to passive cooling. In addition, there is a critical evaluation of the use of air conditioning and the in the use of a mechanical approach.

The book is a sequent to the previously well-received book on the same topic and goes further in terms of looking at how advances in passive cooling can also address urban issues such as indoor air quality and heat island effects. In addition, a comprehensive discussion is given of the key dimensions to passive cooling, namely solar control, ventilation, ground, evaporative, and radiant cooling. Many well-respected authorities in the field have written the chapters and the content provides good evidential knowledge for the strategies proposed.

Overall, the authors present the technical material in clear and readable terms. The book is essential reading for building design professionals.

Richard Hyde, University of Sydney,
Australia



History of Structural Theory

4609

The History of the Theory of Structures from Arch Analysis to Computational Mechanics, by Karl-Eugen Kurrer, Wilhelm Ernst & Sohn, Rotherstrasse 21, 10245-Berlin, Germany, 2008. 848pp, illus., index. Price €119 Hbk.

While the theory of structures has been studied and written about for many centuries, the actual content of the subject has of course changed almost beyond recognition. The history of this discipline was also a current topic of

interest for much of that time; but for much of the twentieth century it had received only limited attention from historians. There has been a revival of interest in exploring and documenting structural history in the past decade or so, with the first major international conference in Madrid in 2005 (organised by Santiago Huerta).

Karl-Eugen Kurrer has been a teacher and researcher in the theory of structures for 30 years, and editor of the journal *Stahlbau* for twelve years. He published the present book in German (as *Geschichte der Baustatik*) in 2002. The very readable English translation by Philip Thrift incorporates updated and additional material that Kurrer has introduced since the original version.

Kurrer quotes Goethe '*the history of science is science itself*', to argue the case for bringing the historical study well into the mainstream of the subject itself, and he also argues that the expression *theory of structures* is inseparable from the synthesis of real structures and their construction and use. Even the German *Baustatik*, wider in meaning than the English translation used here, does not satisfy him as being broad enough in scope.

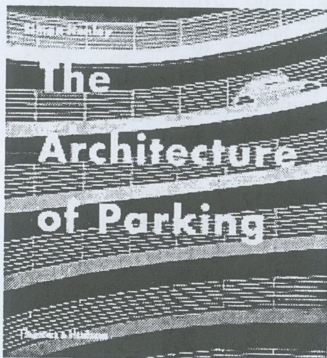
He begins by setting a few key phases in the history: the geometric statics understood by the Greek philosophers, the introduction of scientific reason (Blondel, Hooke and particularly Galileo), the introduction of calculus, the combination of strength of materials and elastic theory to enable a theory of bending (Navier), application to real structures with multiple elements and materials, and the concepts of stability and redundancy. As the theory developed, it became possible to make more realistic analyses of the complexity that always existed in buildings, but had previously been reduced to simplified models. Computational methods, matrix algebra, relaxation methods, finite element analysis and developments in computers in recent years have accelerated improvements in analysis. The ability to analyse more complex and irregular structures has in turn enabled designers to become more imaginative. Kurrer follows the way in which each of these advances relies on all the steps that have gone before. He sees the synthesis of a whole design, rather than analysis

of elements or of the whole, as the important outcome of all the theory.

Into this mix, the author places the advances in education, partly driven by political and military influences, and the need for improved constructions driven by commercial interests, including bridges associated with advances in transport, especially railways; and he examines in detail the different philosophies of the leading figures, and their schools of followers, throughout the process. He examines in some detail the relationship between text, image and symbol in the theory of structures, and explores twelve scientific controversies that have contributed to the development of the theory.

The book is profusely illustrated with reproductions of historical documents and sketches, as well as elegantly simple line drawings, and portraits of leading figures. It includes 175 brief biographies of leading figures, a very extensive bibliography, a subject index and a name index. It would form a valuable resource in any library concerned with the history of structures or development of structural theories and methods, and a reference work for any teacher or student in these areas.

Peter R. Smith, University of Sydney, Australia



Parking Stations as an Architectural Statement

4610

The Architecture of Parking, Simon Henley, Thames and Hudson, 181A High Holborn, London WC1V 7QX, UK, 2007. 256pp, illus., index of architects. Price £24.95 Hbk.

A common view of parking stations is of ugly buildings that interrupt the urban fabric, and alienate the city from people as much as roadways do. Yet ideas of a ring of car parks 'protecting' the pedestrian environment within a city centre go back at least to Louis Kahn in the post-war period of last century. Although this ideal is seldom realised for whole cities, the car park of a suburban shopping mall serves the same purpose for the environment within the mall. Simon Henley, principal of a London architectural firm and previously shortlisted for UK Young Architect of the Year, has taken a fresh look at this building type along with Sue Barr, whose 568 photographs provide the visual impact of this book.

Henley refers to some early examples such as a 1905 Auguste Perret garage and a fanciful 1925 Melnikov sketch for a car park over the Seine; but his interest is in more recent examples where, as he says, "the sincerity of the 1950s and 1960s had been replaced by playfulness" (p.8). The opportunity for this playfulness, made possible by an entirely different set of constraints from most other building types, has attracted architects of the calibre of Kahn, Rem Koolhaas, Paul Rudolph and others he name-drops on the jacket. Many earlier examples were indeed brutal and alienating, but with discretion and even humour, architects have been able to exploit the possibilities of the parking station.

After a concise introduction, with just enough examples but cross-referenced to more detailed case studies later in the book, the author has four main chapters, each with a photo-essay, a narrative on the topic of the chapter, and a series of case studies to elaborate on the narrative. The first of these is "Matter" (the materiality of the buildings). The post-war expansion of the automobile, and of places to leave it, coincided with an architecture of brutalism and exposed concrete; without even the constraints of human occupation, car parks were destined to brutalise their environment and to weather unacceptably. Eventually, though, architects learned how to use materials more sensitively, to make good concrete, and to use other materials.

The next chapter, "Elevation", explores how the exterior can be used to communicate the building's order and logic. In some cases the elevation is the

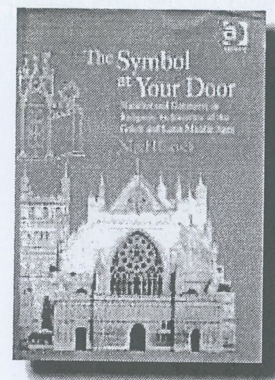
section. The layout of the building, and its construction, can provide the impetus for a piece of abstract decoration in the city. The possibilities are different whether the building is freestanding, or above or below other occupancies.

"Light", or the uneven availability of it, leads to dark and unfriendly spaces where objects are seen against the perimeter glare. Some of the more imaginative solutions manage to limit the glare with narrower plans and sculptured repeating elements on the facade to reflect some light further inwards, and soften the harsh edges. Even with underground facilities, sometimes a central well can be incorporated to admit daylight.

The fourth chapter, "Obliquity", discusses the possibilities for innovation arising from the use of individual ramps, or continuously ramped surfaces. This is the chapter in which the layout and topology of the type are explored in most detail, but still mainly from the viewpoint of the experience of the motorist within and the observer without. The continuous inclined surface, Henley considers, creates the greatest impact. It tends to disorient the human body, but only to such an extent to provide interest rather than discomfort.

If you want precise details of the dimensions and clearances of a car park, go to one of the architectural reference books. If you seek understanding of the building type, or inspiration in designing it, or simply joy in exploring its variety, this may well be the book for you.

Peter R. Smith, University of Sydney, Australia



Religious Symbols in Architecture

4611