

Addressing the Climate in Modern Age's Construction History

Carlo Manfredi
Editor

Addressing the Climate in Modern Age's Construction History

Between Architecture and Building Services
Engineering

 Springer

Editor
Carlo Manfredi
Politecnico di Milano
Milan, Italy

ISBN 978-3-030-04464-0 ISBN 978-3-030-04465-7 (eBook)
<https://doi.org/10.1007/978-3-030-04465-7>

Library of Congress Control Number: 2018965442

© Springer Nature Switzerland AG 2019

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This Springer imprint is published by the registered company Springer Nature Switzerland AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Preface

This book aims to cast light on the environmental control in buildings, since the seventeenth century onwards. Even before building services became the main hallmark in buildings, in order to face sanitary and comfort increasing needs, pioneering experiences had improved the design skills of professionals. After being for ages decided, most of all, by construction passive features, indoor climate went under the setting of installations and plants, representing the most significant shift of paradigm in the modern age's construction history.

This change being not without consequences, the essays collected are focused to show how deep is the connection between architectural design, comfort requirements and environmental awareness throughout the long nineteenth century.

Taken into account the differences between different European Countries, the focused topic will be of interest to architects and designers which are concerned with environmental design, in order to define a deeper knowledge of heritage behaviour face to the climate requests, particularly going towards a future in which energy savings and fuel consumption reduction will border our ways.

The volume is composed of nine contributions, written by 11 authors:

- Chapter “[Indoor Climate, Technological Tools and Design Awareness: An Introduction](#)” by book editor Carlo Manfredi, which also serves as Introduction of the volume;
- Chapter “[Heating Verona in the Nineteenth Century. From the Fireplace to the Hot Water Systems](#)” by Marco Cofani and Lino Vittorio Bozzetto;
- Chapter “[The Alte Pinakothek](#)” by Melanie Eibl-Bauernfeind;
- Chapter “[Two Early Examples of Central Heating Systems in France During the 19th Century](#)” by Emmanuelle Gallo;
- Chapter “[Camillo Boito and the School Buildings Indoor Climate in the Unified Italy \(1870–1890\)](#)” by Alberto Grimoldi and Angelo Giuseppe Landi;
- Chapter “[Tradition and Science: The Evolution of Environmental Architecture in Britain from 16th to 19th Century](#)” by Dean Hawkes;
- Chapter “[Not Just a Summer Temple: The Development of Conservation and Indoor Climate in Nationalmuseum, Sweden](#)” by Mattias Legnér;

- Chapter “[Asserting Adequacy: The Crescendo of Voices to Determine Daylight Provision for the Modern World](#)” by Oriel Prizeman;
- Chapter “[The Houses of Parliament and Reid’s Inquiries into User Perception](#)” by Henrik Schoenefeldt.

Milan, Italy

Carlo Manfredi

Contents

Indoor Climate, Technological Tools and Design Awareness: An Introduction	1
Carlo Manfredi	
Heating Verona in the Nineteenth Century. From the Fireplace to the Hot Water Systems	27
Marco Cofani and Lino Vittorio Bozzetto	
The Alte Pinakothek	63
Melanie Bauernfeind	
Two Early Examples of Central Heating Systems in France During the 19th Century	83
Emmanuelle Gallo	
Camillo Boito and the School Buildings Indoor Climate in the Unified Italy (1870–1890)	103
Alberto Grimoldi and Angelo Giuseppe Landi	
Tradition and Science: The Evolution of Environmental Architecture in Britain from 16th to 19th Century	131
Dean Hawkes	
Not Just a Summer Temple: The Development of Conservation and Indoor Climate in Nationalmuseum, Sweden	147
Mattias Legnér	
Asserting Adequacy: The Crescendo of Voices to Determine Daylight Provision for the Modern World	171
Oriel Prizeman	
The Houses of Parliament and Reid’s Inquiries into User Perception	191
Henrik Schoenefeldt	